

Annual Energy Audit Report

Noida Power Company Limited, Greater Noida
Uttar Pradesh

Year: 2021-22



Annual Energy Audit for Noida Power Company Limited as per Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021 Notified on 06.10.2021

Noida Power Company Limited

Electric Sub Station, Knowledge Park-IV
Greater Noida, Gautam Buddha Nagar
Uttar Pradesh



Prepared For



Bureau of Energy Efficiency

[Govt. of India - Ministry of Power]
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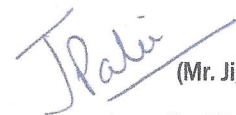
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July 2022

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Acknowledgement

We are also thankful to Noida Power Company Limited, for their positive support in undertaking this intricate task of verification study. The energy audit field visit and 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. Sanjiv Kumar Goel	-	General Manager
Mr. Vijay Pratap Singh	-	Deputy Manager
Mr. Krishana Chandra	-	Energy Manager

and all other supporting staff who have given full co-operation and support. They took keen interest and gave valuable inputs during the course of study.

Study Team

The annual energy audit involved engagement of following team members representing MITCON Consultancy & Engineering Services Ltd. that was awarded the said work by Noida Power Company Limited., vide the LOI No.: P/104B/FY 2021-22/121 dated March 16, 2022.

Company/ Institution/ Organization	Team Member	Designation	Role
MITCON Consultancy & Engineering Services Ltd.	Mr. Jignesh Patel	Accredited Energy Auditor (AEA-0104)	Project head, review of data and report
	Mr. Sadan Kumar Sinha	Sector Expert	Field visit inspection, review of data and report
	Mr. Anjum Mushtaque	Energy Auditor	Field visit inspection, document verification and report writing
	Mr. Rahul Kumar	Certified Energy Auditor	Field visit inspection, document verification and report writing
	Mr. Ajay Maurya	Certified Energy Manager	Field visit inspection, document verification and report writing
	Mr. Ankit Srivastava	Project In-charge	Field visit inspection, document verification and report writing

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 Kilometer
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 Unit
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	T & D Transmission and Distribution
NPCL	Noida Power Corporation Limited
PVC	Polyvinyl chloride
XLPE	Cross-linked polyethylene

Table of Contents

1	Executive Summary.....	9
1.1	Objective of the study.....	9
1.2	Brief Overview of DISCOM.....	9
1.3	Important Parameters	9
1.4	Critical Comments	9
2	Background.....	9
2.1	About Annual Energy Audit Regulations for DISCOMs	10
2.2	Role of BEE.....	10
2.3	About DISCOM Sector	10
2.4	Period of Energy Auditing and accounting.....	11
3	Introduction of DISCOM [NPCL].....	12
3.1	Name and Address of Designated Consumer.....	12
3.2	Name and details of energy manager and Authorized signatory of DISCOM	12
3.3	About DISCOM.....	12
3.4	General Information	13
4	Evaluation of Energy Management System: Discussion and analysis.....	14
4.1	Energy accounts for previous years	14
4.2	Input Energy Detail.....	14
4.2.1	Source of Power Purchase.....	14
4.2.2	Input Energy Feeder Wise	15
4.3	Infrastructure Details	17
4.3.1	Transformers and Feeders (Voltage level wise)	17
4.3.2	Single Line Diagram.....	25
4.3.3	Summary of Electrical Power Distribution Infrastructure	26
4.4	Energy accounts and performance in the current year	32
4.4.1	Voltage Wise Losses	32
4.4.2	Feeder and DT wise losses.....	32
4.5	Unit Performance on Energy Consumption and reduction of losses details	32
4.5.1	DISCOM Purchase Energy	32
4.5.2	Net Input Energy	32
4.5.3	Total Billed Energy	33
4.5.4	Transmission & Distribution loss	33
4.5.5	Category wise energy and per capita consumption	34
4.5.6	Detailed Consumer Wise Energy Consumption.....	34
4.5.7	Energy Consumption and reduction of losses details.....	35
5	Energy Conservation Measures.....	36
5.1	Energy Conservation Measures already taken.....	36
5.2	Energy Conservation Measures Recommended	37

6	Inclusions & Exclusions.....	37
7	Critical Analysis.....	37
8	Measuring Equipment and Instrument Calibration	38
	Annexures	39
	Annexure- I Introduction of Verification Team	59
	Annexure- II Minutes of Meeting with the NPCL team	60
	Annexure- III Check List prepared by auditing Firm	61
	Annexure- IV Brief Approach, Scope & Methodology for audit	62
	Annexure- V Power Purchase Detail (Sample Power Purchase bills)	64
	Annexure- VI Single Line Diagram	65
	Annexure- VII Category Wise Service Details	66
	Annexure- VIII List of Parameters arrived through calculation or formulae with list of documents as source of data	67
	Annexure- IX Calibration Reports	68

List of Tables

Table 1	Day wise activity	11
Table 2:	Sources of power purchase	14
Table 3:	Feeder wise input energy.....	15
Table 4:	Power transformer	17
Table 5:	Grid Substation	17
Table 6:	11 KV Feeders.....	19
Table 7:	Electrical power distribution infrastructure	26
Table 8:	Voltage level wise losses.....	32
Table 9:	Purchase energy.....	32
Table 10:	Net input energy.....	32
Table 11:	Total billed energy.....	33
Table 12:	T&D loss	33
Table 13:	Category wise per capita consumption	34
Table 14:	Consumer wise energy consumption details	34
Table 15	ACS – ARR Gap analysis:	38

1 Executive Summary

1.1 Objective of the study

- To conduct the energy audit of the DISCOM for FY 2021-22 as per Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021.
- To identify areas of high loss and pilferage, and thereafter focus efforts to take corrective action
- Recommend energy conservation measures

1.2 Brief Overview of DISCOM

Noida Power Company Ltd. ("NPCL/Company") is a Distribution Supply Licensee under the provision of Electricity Act, 2003. The Company distributes electricity across 335 sq.km. area in Greater Noida in District Gautam Buddha Nagar in the State of Uttar Pradesh reaching out to a population of about 7 lacs spread across hamlets, villages and townships. The Company is a joint venture between the RP-Sanjiv Goenka Group, a leading business house in India and Greater Noida Industrial Development Authority, an autonomous body of Government of Uttar Pradesh, responsible for town planning and infrastructure development.

1.3 Important Parameters

- NPCL purchases power under long term, medium term, short term contract and from power exchange(s). NPCL at present is receiving input Power at 33 KV Voltage level. NPCL also has small solar and net metered consumers-based generation embedded in its area.
- NPCL has single network circle with n-1 RMU infrastructure. There are 307 distribution feeders out of which 36 are 33KV imports feeders. 271 feeders are operated at 11kV voltage level.
- NPCL has 6028 connected Distribution transformers. It has total 117753 registered consumers with 2490 nos. of unmetered connection. Among these, 90% of the consumers are belongs to residential category, 7% of them are commercial LT consumer's category and rest of 3% comprise of industrial/commercial HT and Agriculture Consumers.
- All the feeders of 33KV and 11KV are metered and communicable through GSM /own optic fiber network. NPCL has completed 98 % metering at consumer end and 2 % of consumers are unmetered. NPCL has also completed 6% metering at DT level out of which 3% DTs having communicable meters. NPCL is planning to install 100 % Metering system at DT Level as early as possible. All meters at 33 kV and 11 kV are periodically calibrated.
- The total connected/contracted load demand of licensee is 1250 MW out of which 41% of the contracted load are registered under residential category, 45% of the contracted load are registered under HT industrial and Commercial consumer category, while 14% of the contracted load are registered under LT commercial, LT industrial and Agriculture category.
- The input energy at NPCL periphery for the FY 21-22 is 2540 MU out of which 2338 MU are metered and billed whereas 202 MU (~ 7.95%) are lost in distribution of electricity. The AT & C loss is 7.64% with 100.34 % of Collection Efficiency.

1.4 Critical Comments

Based on physical inspection of datasheets and invoice history, no variation in the input energy billed vs reported in proforma and output energy sold vs reported in proforma was found. Below are two recommendations provided by auditor for improving energy accounting and monitoring.

1. The collection Efficiency of the NPCL for the FY-2021-22 is 100.34%, which is more than 100%. It is more than 100% on account of collection of past year arrears.
2. NPCL is not maintaining feeder wise losses for all the feeders however they are maintaining voltage level wise losses. It is recommended to start maintaining feeder wise losses for all the feeders for comprehensive reporting
3. The % Metering at DT Level is found 6 %. NPCL has already started installing DT meters for 100% coverage for DT level energy accounting and monitoring. It is required that the work should be completed in a time bound manner.

2 Background

2.1 About Annual Energy Audit Regulations for DISCOMs

In 2008, Government of India announced 'National Action Plan on Climate Change (NAPCC), identifying eight missions to promote inclusive growth in the country. The National Mission for Enhanced Energy Efficiency (NMEEE) is one of the eight identified missions under.

Bureau of Energy Efficiency (BEE) had issued draft regulations namely, (Manner and Intervals for Conduct of Energy Audit (Accounting) in Electricity Distribution Companies) published vide notification No.18/1/BEE/DISCOM/2021, dated the 15th April, 2021 in the Gazette of India, Extraordinary, Part III, Section 4, inviting objections and suggestions from all persons likely to be affected thereby.

After due consideration of the objections and suggestions received, the Bureau of Energy Efficiency (BEE) has issued the regulations (published vide notification No.18/1/BEE/DISCOM/2021, dated the 6th October, 2021 in the Gazette of India, Extraordinary, Part III, Section 4). These regulations apply to all electricity distribution companies specified as designated consumer.

Under the above-mentioned regulation, 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.

2.2 Role of BEE

Role of BEE for formulation of Sector Specific Technical committee and finalization of methodology. Establishment of Energy Consumption Norms and Standards for DCs in consultation with Technical Committee. Conducting the Regional Workshops and guiding DCs for respective regulations.

2.3 About DISCOM Sector

A healthy distribution sector is considered as the key to a financially viable power sector. One of the major challenges affecting the health of Indian distribution sector is the high aggregate technical and commercial (AT&C) losses. AT&C loss is the sum of technical loss and commercial loss. The technical loss occurs due to flow of energy into transmission and distribution network. Technological advancements could help in reduction of technical loss to an optimum level. As per international norms, the technical loss in a distribution system should be in the range of 4-5%.

On the other hand, the commercial loss is mostly man-made and occurs due to inefficient billing and collection of the energy supplied, illegal connections, theft, meter tampering, and pilferage, etc. The commercial loss is occurring mostly due to managerial issues and could be brought down to zero with efficient administrative practices. National aggregate technical and commercial losses stood at 22%. As long as AT&C losses continues to be in such a high range, it is difficult for the DISCOMs to be commercially viable.

In order to improve the energy efficiencies in the power system, State electricity Distribution Companies are included in PAT cycle II. DISCOMs having AT&C losses of 1000 Million Unit (MU) (Equivalent to 86000 MTOE) and above are notified as Designated Consumers and targets were assigned to 44 DISCOMs for reducing the T&D losses under PAT Cycle-II. T&D losses is considered as performance matrix of electricity distribution companies under PAT.

As per the notification, which was formulated in consultation with the Bureau of Energy Efficiency (BEE), "All entities having issued distribution license by State/Joint Electricity Regulatory Commission under the Electricity Act, 2003..." are notified as designated consumers (DCs). After this notification, all DISCOMs will be governed under various provisions of the EC Act 2001, such as appointment of energy manager, energy accounting and auditing, identification of energy losses category-wise, and implementation of energy conservation and efficiency measures. With this, the number of DISCOM covered under the EC Act.2001 will increase from 44 to 103.

This decision will facilitate energy accounting and auditing as mandatory activity for all the DISCOM, leading to the actions towards reducing losses and increase their profitability. It is expected to help DISCOMs to monitor their performance parameters and bring in transparency in the distribution sector through professional inputs. It will also assist in developing projects for reducing the electricity losses by DISCOMs and implementing effective solutions.

It is expected to improve the financial state of DISCOMs. The quarterly data of these DISCOMs will be collected and monitored by the government to suggest measures for increasing the efficiency and reduce the energy losses.

2.4 Period of Energy Auditing and accounting

Period of Energy accounting in this report is considered to be FY 2021-22 i.e. from 1-April 2021 till 31-March 2022.

The detailed energy audit site inspection and data verification exercise initiated from 05 July 2022 and was completed on 07-July. 2022. Detailed description of day wise activity is mentioned in below table.

Table 1 Day wise activity

Date & Time	Activity	Description of Work Done
05-July-2022		
10:00	Arrival on site	
10:00 till 12:30	Opening Meeting: Scope of work, timetable, and verification methodology	Meeting with concerned site engineers and officers, discussion on audit methodology and site support required
01:30 till 17:30	Site Inspection Planning	Team composition, their roles and areas to be covered on site were planned. Internal coordination, approvals, permits, etc. from DISCOM was discussed and put into action
17:30	End of Day 1	
06-July-2022		
10:00 till 18:00	Substation visit and metering cross verification	Visit to 33/11 Kv substation, to measure power for stipulated time after synchronizing clocks of both ends to determine transmission loss and meter error.
07-July-2022		
10:00 till 13:00	Data Verification at NPCL Head office	Data Verification at NPCL Head office
14:00 till 18:00	Site inspection and observation	Visit to various level feeders, their recording and monitoring practice, determination of site-specific documents such joint meter reading, calibration record, meter replacement record, etc.

3 Introduction of DISCOM [NPCL]

3.1 Name and Address of Designated Consumer

Noida Power Company Limited (NPCL)
Electric Sub Station, Knowledge Park-IV, Greater Noida
Gautam Buddha Nagar Uttar Pradesh-201310

3.2 Name and details of energy manager and Authorized signatory of DISCOM

Energy Manager:

Mr. Krishna Chandra Kumar, Certified Energy Manager, EA-32965
Noida Power Company Limited.,
(M) 7835045065 (E) kckumar@noidapower.com

Nodal Officer:

Mr. Sanjiv Kumar Goel (General Manager)
Noida Power Company Limited (NPCL)
Electric Sub Station, Knowledge Park-IV, Greater Noida
Gautam Buddha Nagar Uttar Pradesh-201310

3.3 About DISCOM

Noida Power Company Ltd. ("NPCL/Company") is a Distribution Supply Licensee under the provision of Electricity Act, 2003. The Company distributes electricity across 335 sq.km. area in Greater Noida in District Gautam Buddha Nagar in the State of Uttar Pradesh reaching out to a population of about 7 lacs spread across hamlets, villages and townships. The Company is a joint venture between the RP-Sanjiv Goenka Group, a leading business house in India and Greater Noida Industrial Development Authority, an autonomous body of Government of Uttar Pradesh, responsible for town planning and infrastructure development.

3.4 General Information

General Information				
1	Name of the DISCOM	Noida Power Company Limited		
2	i) Year of Establishment	01-06-1992		
	ii) Government/Public/Private	Private		
3	DISCOM's Contact details & Address			
i	City/Town/Village	Noida Power Company Limited, Electric Sub Station, Knowledge Park-IV, Greater Noida		
ii	District	Gautam Buddha Nagar		
iii	State	Uttar Pradesh	Pin	201310
iv	Telephone	91-120-6226601/02	Fax	NA
4	Registered Office			
i	Company's Chief Executive Name	Mr. P.R. Kumar		
ii	Designation	Joint Managing Director & Dy. Chief Executive Officer		
iii	Address	Noida Power Company Limited, Electric Sub Station, Knowledge Park-IV		
iv	City/Town/Village	Greater Noida	P.O.	201310
v	District	Gautam Buddha Nagar		
vi	State	Uttar Pradesh	Pin	201310
vii	Telephone	91-120-6226601/02	Fax	NA
5	Nodal Officer Details*			
i	Nodal Officer Name (Designated at DISCOM's)	Mr Sanjiv Kumar Goel		
ii	Designation	GM-Corporate and Regulatory Affairs		
iii	Address	Noida Power Company Limited, Electric Sub Station, Knowledge Park-IV		
iv	City/Town/Village	Greater Noida	P.O.	201310
v	District	Gautam Buddha Nagar		
vi	State	Uttar Pradesh	Pin	201310
vii	Telephone	9999448102	Fax	NA
6	Energy Manager Details*			
i	Name	Mr. Krishna Chandra Kumar		
ii	Designation	Energy Manager (Sr. Executive)	Whether EA or EM	EM
iii	EA/EM Registration No.	EA-32965		
iv	Telephone	NA	Fax	NA
v	Mobile	91-7835045065	E-mail ID	kckumar@noidapower.com
7	Period of Information			
	Year of (FY) information including Date and Month (Start & End)	1st April 2021 to 31st March 2022		

4 Evaluation of Energy Management System: Discussion and analysis

4.1 Energy accounts for previous years

For FY 2020-21, NPCL has been already submitted the first Energy audit report in line with Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021 Notified on 06.10.2021.

4.2 Input Energy Detail

4.2.1 Source of Power Purchase

NPCL is purchasing power at 33KV level. NPCL purchase power from both conventional coal generation power station as well as from renewable generating sources including hydropower, wind generating stations.

Some power is also purchased through the energy exchange, DSM, Banking and open access.

NPCL also has In-house generation of solar power through Net-Metered consumers (at 33KV/11KV/LT level), Solar Power Projects of GNIDA (at 11 KV level) and APPCPL (at LT level).

Below table describes source of power supply and their technical details

Table 2: Sources of power purchase

Name of Generation Station	Generation Capacity (In MW)	Type of Station Generation	Type of Contract (in years/months/days)	Type of Grid	Point of Connection (POC) Loss MU	Voltage Level
Dhariwal Infrastructure Ltd	170	Coal	25 years	Inter-State	82.71	33KV
Adani Wind Energy Kutchh One Limited	10	Renewable (Wind)	25 years	Inter-State	1.10	33KV
Adani Solar Energy Chittrakoot One Limited	25	Renewable (Solar)	25 years	Intra-State	1.78	33KV
Tata Power Renewable Energy Ltd	25	Renewable (Solar)	25 years	Intra-State	0.16	33KV
APPCPL (DoAP)	50	Renewable (Hydro)	3 years	Inter-State	13.30	33KV
APPCPL (DoN)	25	Renewable (Hydro)	3 years	Inter-State	6.89	33KV
TPTCL (GoHP)	45	Renewable (Hydro)	3 years	Inter-State	7.47	33KV
APPCPL (Goodwill, HP)	15	Renewable (Hydro)	3 years	Inter-State	2.17	33KV
APPCPL Ren-Non Solar (Source-DoP, GoAP)	10	Renewable Power Non-Solar	6 month	Inter-State	0.45	33KV
APPCPL Ren-Non Solar (Source-DoP, GoN)	12	Renewable Power Non-Solar	6 month	Inter-State	0.43	33KV
APPCPL Ren-Non Solar (Source-MePDCL, Meghalaya)	15	Renewable Power Non-Solar	6 month	Inter-State	1.85	33KV
KREATE Ren-Non Solar (Source-E & PD, Govt of Sikkim)	15	Renewable Power Non-Solar	6 month	Inter-State	1.05	33KV
APPCPL (Source-HSPPL)	100	Renewable (Hydro)	2 month	Inter-State	1.57	33KV
TPTCL (Source-JPL)	1000	Coal	2 month	Inter-State	2.27	33KV
TPTCL (Source-PPGCL)	660	Coal	2 month	Intra-State	0.45	33KV

PTC (Source- Singroli Bhatwari HEP)	99	Renewable (Hydro)	1 month	Inter-State	0.15	33KV
PTC (Source- JPL, Chhattisgarh)	1000	Coal	2 month	Inter-State	1.20	33KV
APPCPL (Source- SEMCORP)	660	Coal	4 month	Inter-State	2.25	33KV
IEX (Power Exchange) and Open Access	-	-	-	-	45.24	33KV

Name of Generation Station	Generation Capacity (In MW)	Type of Station Generation	Type of Grid	Point of Connection (POC) Loss MU	Voltage Level
Net Metered Consumer	24.1	Renewable	Renewable	In-house generation of power	33KV/11KV/LT
Solar Power (GNIDA)	1.0	Renewable	Renewable	In-house generation of power	11KV
Solar Power (APPCPL)	0.4	Renewable	Renewable	In-house generation of power	LT

4.2.2 Input Energy Feeder Wise

Below table describes quantum of energy injected by each power supplier in NPCL grid.

Table 3: Feeder wise input energy

Sr. No	Feeder ID	Voltage Level	Meter Sr. No.	Import (MU)	Remarks
1	FD#03	33KV	SABT0004	97.09	AMR
2	FD#04	33KV	SABT0003	64.39	AMR
3	FD#05	33KV	SABT0007	65.09	AMR
4	FD#06	33KV	SABT0002	20.88	AMR
5	FD#07	33KV	SABT0001	96.69	AMR
6	FD#08	33KV	SABT0006	40.30	AMR
7	FD#09	33KV	SABT0005	85.30	AMR
8	FD#11	33KV	SABT0040	57.56	AMR
9	Incomer No. 01	33KV	Q0287781	5.24	AMR
10	Incomer No. 04	33KV	Q0287780	0.02	AMR
11	NS#01	33KV	SABT0047	55.60	AMR
12	NS#02	33KV	SABT0039	75.63	AMR
13	NS#03	33KV	SABT0035	65.16	AMR
14	NS#04	33KV	SABT0034	43.68	AMR
15	NS#05	33KV	SABT0038	75.40	AMR
16	RC#01	33KV	UP-3245A	87.56	AMR
17	RC#02	33KV	UP-3246A	99.86	AMR
18	RC#03	33KV	UP-3239A	81.32	AMR
19	RC#04	33KV	UP-3240A	86.17	AMR
20	RC#05	33KV	UP-3241A	45.91	AMR
21	RC#06	33KV	UP-3242A	71.08	AMR
22	RC#07	33KV	UPP34441	87.13	AMR
23	BUS COUPLER #08	33KV	UPP34672	2.63	AMR
24	RC#09	33KV	UPP34681	45.96	AMR

25	RC#10	33KV	UPP34682	84.95	AMR
26	RC#11	33KV	UPP34683	66.22	AMR
27	RC#12	33KV	UPP34684	87.50	AMR
28	RC#13	33KV	UP-3049A	76.94	AMR
29	RC#14	33KV	UP-3050A	74.06	AMR
30	RC#15	33KV	UP-3051A	84.72	AMR
31	BUS COUPLER RC#16	33KV	UP-3052A	37.04	AMR
32	RC#17	33KV	UP-0085E	82.91	AMR
33	RC#18	33KV	UP-0087E	66.74	AMR
34	RC#19	33KV	UP-0089E	40.69	AMR
35	RC#20	33KV	UP-0067E	86.32	AMR
36	RC#22	33KV	XC476431	97.70	AMR
37	RC#23	33KV	XC476430	88.69	AMR
38	RC#24	33KV	XC476433	99.14	AMR
39	In-house generated	33KV	-	10.75	AMR & Data Base

4.3 Infrastructure Details

4.3.1 Transformers and Feeders (Voltage level wise)

Below table describes installed capacity and infrastructure of power distribution available with NPCL

Table 4: Power transformer

Power Transformers Details			
Voltage Ratio	Rating	Count (No's)	Capacity (MVA)
33/11 KV	25MVA	3	75
	12.5MVA	36	450
	10MVA	31	310
	7.5MVA	2	15
	5MVA	14	70
Total		86	920

Table 5: Grid Substation

Sl. No.	Type of Substation	Name of Substation
1	33/ 11 kV Substation	Surajpur South
2	33/ 11 kV Substation	Udyog Kendra
3	33/ 11 kV Substation	Alpha-1
4	33/ 11 kV Substation	Girdharpur
5	33/ 11 kV Substation	Delta-2
6	33/ 11 kV Substation	EPIP
7	33/ 11 kV Substation	Sector - 37
8	33/ 11 kV Substation	Builders Area
9	33/ 11 kV Substation	Knowledge Park - II
10	33/ 11 kV Substation	Knowledge Park - III
11	33/ 11 kV Substation	Site B
12	33/ 11 kV Substation	Container Corporation
13	33 kV Switching Station	Neuman Switching station
14	33/ 11 kV Substation	Hatewa
15	33/ 11 kV Substation	Jalpura
16	33/ 11 kV Substation	Lakhnawali
17	33/ 11 kV Substation	Eta (SB GIS)
18	33/ 11 kV Substation	DM Awas (SB GIS)
19	33 kV Switching & 33/11 kV Substation	Surajpur
20	33/ 11 kV Substation	Sunpura(Kheri)
21	33/ 11 kV Substation	Ecotech Extension-1
22	33/ 11 kV Substation	Gamma-1
23	33/ 11 kV Substation	CHI-3
24	33/ 11 kV Substation	Swarn Nagari
25	33 kV Switching Station	Honda Siel Switching Station
26	33/ 11 kV Substation	Sigma-4
27	33 kV Switching & 33/11 kV Substation	CHI-4 (DB GIS)
28	33 kV Switching & 33/11 kV Substation	Ecotech-2 (DB GIS)
29	33/ 11 kV Substation	Beta-1
30	33/ 11 kV Substation	P3
31	33/ 11 kV Substation	Luksar Jail

Sl. No.	Type of Substation	Name of Substation
32	33 kV Switching & 33/11 kV Substation	Sec PI 1 & 2 (Birondi) (DB GIS)
33	33/ 11 kV Substation	XU-1
34	33 kV Switching & 33/11 kV Substation	KP-5 ESS 10 (DB GIS)
35	33/ 11 kV Substation	Delta-1
36	33 kV Switching & 33/11 kV Substation	KP-5 ESS 2 (DB GIS)
37	33 kV Switching & 33/11 kV Substation	IT City (DB GIS)
38	33/ 11 kV Substation	Ecotech-15
39	33/ 11 kV Substation	Techzone-4
40	33 kV Switching & 33/11 kV Substation	Zeta-1 (DB GIS)
41	33 kV Switching & 33/11 kV Substation	Ecoetch-6 (DB GIS)
42	33/ 11 kV Substation	KP-1(Upgradation)
43	33/ 11 kV Substation	Sector 36 (Upgradation)
44	33/ 11 kV Substation	Omicron-3 (AIS)
45	33/ 11 kV Substation	Sector 2 (GNIDA)
46	33/ 11 kV Substation	Sector 3 (GNIDA)
47	33 kV Switching & 33/11 kV Substation	Sector 16 Residential (DB GIS)
48	33/ 11 kV Substation	Beta-2
49	33 kV Switching Station	Delta-2 Switching Station
50	33 kV Switching & 33/11 kV Substation	Delta-3 Switching cum Station (DB GIS)
51	33 kV Switching & 33/11 kV Substation	XU-3 (DB GIS)
52	33 kV Switching & 33/11 kV Substation	ESS-6 KP-5 (DB GIS)
53	33 kV Switching Station	KP-2 Switching Station
54	33 kV Switching Station	KP-3 Switching Station
55	33 kV Switching Station	Omega-2 Switching Station
56	33 kV Switching & 33/11 kV Substation	DMIC Substation
57	33 kV Switching & 33/11 kV Substation	Site C (New) Switching cum Substation (DB GIS)
58	33/ 11 kV Substation	33/11kV CGEWHO Substation

Table 6: 11 KV Feeders

S.No.	FEEDER_NAME	Feeder Type	Name of Substation
1	Anmol Bakers	INDUSTRIAL	Ecotech-2 (DB GIS)
2	SUPER SEAL	Industrial	Ecoetch-6 (DB GIS)
3	SECTOR-1	Urban	Sector 2 (GNIDA)
4	Unikom	MIXED	Udyog Kendra
5	Rahul	MIXED	Udyog Kendra
6	BISRAKH BLOCK	Rural	Jalpura
7	AVJ HEIGHTS	URBAN	Delta-3 Switching cum Station (DB GIS)
8	Referral Hospital	URBAN	DM Awas (SB GIS)
9	DELTA-1	URBAN	Delta-2
10	NALGARHA	RURAL	Ecotech-2 (DB GIS)
11	EXPRESSWAY	RURAL	Knowledge Park - II
12	CRPF Group centre	URBAN	DM Awas (SB GIS)
13	Toy City	MIXED	Udyog Kendra
14	IEC COLLEGE	INSTITUTIONAL	KP-1(Upgradation)
15	Site-C	INDUSTRIAL	Site B
16	Sector-31	Industrial	Sector 36 (Upgradation)
17	Sec-33 S/s-3	Urban	Sector - 37
18	Holitech India	Industrial	Sigma-4
19	A&D POCKET	RURAL	Surajpur
20	JBM AUTO	Industrial	Sector 36 (Upgradation)
21	Innotech	INDUSTRIAL	Udyog Kendra
22	Luksar	Rural	Luksar Jail
23	Shyam Pipe	INDUSTRIAL	Site B
24	DIVINE ELECTRONICS	Industrial	XU-3 (DB GIS)
25	Mirza International	Industrial	Ecotech Extension-1
26	P-3 C Pocket	Urban	P3
27	ALPHA-2	URBAN	Alpha-1
28	AIMS GOLF TOWN	Urban	Techzone-4
29	ITBP	URBAN	DM Awas (SB GIS)
30	KP-2	INSTITUTIONAL	Knowledge Park - II
31	CENTRAL WAREHOUSING	Industrial	EPIP
32	Site C E&F Block	INDUSTRIAL	Site C (New) Switching cum Substation (DB GIS)
33	Meenakshi	INDUSTRIAL	Site C (New) Switching cum Substation (DB GIS)
34	Site-C H Block	INDUSTRIAL	Site B
35	Senior Citizen	Urban	Builders Area
36	ALPHA-2 I POCKET	MIXED	Delta-1
37	Sigma-4	Urban	Sigma-4
38	GAMMA-2 H POCKET	URBAN	Delta-2
39	Bilaspur Town	Rural	Girdharpur
40	BETA-2 J POCKET	URBAN	Beta-2
41	KP-4 SUBSTATION-1	URBAN	Zeta-1 (DB GIS)
42	NATIONAL DATA CENTRE	INSTITUTIONAL	ESS-6 KP-5 (DB GIS)

S.No.	FEEDER_NAME	Feeder Type	Name of Substation
43	DELHI PUBLIC SCHOOL	INSTITUTIONAL	KP-5 ESS 2 (DB GIS)
44	P-3 B Pocket	Urban	P3
45	Ultimo	Urban	Omicron-3 (AIS)
46	STAR TRACK	INDUSTRIAL	Container Corporation
47	Omicron-3	Urban	Omicron-3 (AIS)
48	AKRITI PRINTERS	Industrial	Ecotech-15
49	SECTOR-3 POCKET C & D	Urban	Sector 3 (GNIDA)
50	TUGALPUR MARKET	URBAN	KP-1(Upgradation)
51	DEVLA	RURAL	Site B
52	Dabra	Rural	XU-3 (DB GIS)
53	Site-4 (HP)	Industrial	Swam Nagari
54	JAGAT FARM	MIXED	Knowledge Park - III
55	Khanpur	Rural	Ecotech Extension-1
56	TATA MOTOR	MIXED	Jalpura
57	Nawada	Rural	Hatewa
58	KP-5	INSTITUTIONAL	Ecotech-15
59	AUTHORITY STAFF QUARTERS	URBAN	Zeta-1 (DB GIS)
60	INOX	INDUSTRIAL	Surajpur
61	GHORI BACHERA	RURAL	XU-1
62	BHAGAT SINGH	RURAL	Surajpur
63	AIMNABAD	Rural	Jalpura
64	DOOB AREA	RURAL	Lakhnawali
65	SAVITRI BAI PHULE	Industrial	EPIP
66	Kanarsi	Rural	Hatewa
67	KASNA 6% ABADI	urban	Ecoetch-6 (DB GIS)
68	GAMMA-1 F POCKET	URBAN	Gamma-1
69	NOIDA University	Urban	IT City (DB GIS)
70	TIVOLI	MIXED	Delta-1
71	TUBEWELL	RURAL	Ecotech-2 (DB GIS)
72	DTL	INDUSTRIAL	Site B
73	Chuharpur Khadar	Rural	CHI-4 (DB GIS)
74	AMBEDKAR BHAWAN	INDUSTRIAL	Surajpur South
75	Agro Fresh	INDUSTRIAL	Zeta-1 (DB GIS)
76	ATEN FOODS	Industrial	Luksar Jail
77	JALPURA	RURAL	Jalpura
78	SECTOR-2 OVERHEAD TANK	Urban	Sector 2 (GNIDA)
79	Dalelgarh	Rural	Hatewa
80	Balak Inter College	URBAN	Udyog Kendra
81	SUNSHINE (KP-3)	URBAN	Knowledge Park - III
82	AJNARA SPORTS CITY	Urban	KP-5 ESS 2 (DB GIS)
83	Sector-03	Urban	KP-5 ESS 2 (DB GIS)
84	SECTOR-12	Urban	KP-5 ESS 2 (DB GIS)
85	LOTUS PARK	URBAN	Surajpur
86	GHARBARA VILLAGE	Rural	IT City (DB GIS)
87	K U INFOTECH	Industrial	Ecotech-15

S.No.	FEEDER_NAME	Feeder Type	Name of Substation
88	6% ROZA YAKUBPUR	Urban	Ecotech-15
89	HALDUANI	RURAL	Jalpura
90	BETA-1	URBAN	Beta-1
91	Sunshine	Industrial	Ecotech Extension-1
92	AMAZON SERVICES	Industrial	Ecoetch-6 (DB GIS)
93	ITHERA 6% ABADI	Urban	Techzone-4
94	KAILASH HOSPITAL	INSTITUTIONAL	KP-1(Upgradation)
95	P-4	Urban	Builders Area
96	SECTOR-2 PKT A	Urban	Sector 2 (GNIDA)
97	Sunrise Auto	INDUSTRIAL	Udyog Kendra
98	SECTOR-2 PKT C&D	Urban	Sector 2 (GNIDA)
99	Bhagwati	INDUSTRIAL	Ecotech-2 (DB GIS)
100	SECTOR-2 PKT E&F S/S-15,16,17,18	Urban	Sector 2 (GNIDA)
101	SECTOR-2 PKT B	Urban	Sector 2 (GNIDA)
102	SECTOR-3 B-POCKET	Urban	Sector 3 (GNIDA)
103	TECHZONE-7	Urban	Sector 3 (GNIDA)
104	Swarnagari S/s No-2	Urban	Swarn Nagari
105	Chi-4	Urban	CHI-4 (DB GIS)
106	HOUSING SOCIETY	URBAN	Alpha-1
107	GIRIDHARPUR	Rural	Girdharpur
108	SECTOR-20	Urban	ESS-6 KP-5 (DB GIS)
109	Sawney sons	INDUSTRIAL	Ecotech-2 (DB GIS)
110	DELTA-2	URBAN	Delta-2
111	GHORI AND JUNPAT 6% ABADI	Urban	Omicron-3 (AIS)
112	JHALDA	Rural	Hatewa
113	Bajaj	INDUSTRIAL	Ecotech-2 (DB GIS)
114	BENNETT UNIVERSITY	Industrial	Ecoetch-6 (DB GIS)
115	SANTOSH NAGAR	RURAL	Container Corporation
116	BETA-2	URBAN	Beta-1
117	BZP	RURAL	Lakhnawali
118	ALPHA-1	URBAN	Alpha-1
119	MADHAIYA	URBAN	Sector 36 (Upgradation)
120	Phi-3 & Phi-4	Urban	CHI-3
121	GALGOTIA	INSTITUTIONAL	Builders Area
122	NAVADA (URBAN)	URBAN	Delta-1
123	Jail Complex	urban	Luksar Jail
124	Jail Residential	urban	Luksar Jail
125	ECOTECH-6	Industrial	Ecoetch-6 (DB GIS)
126	POLICE LINE & SSP OFFICE	URBAN	Surajpur
127	ITS	INSTITUTIONAL	Knowledge Park - III
128	P-2	Urban	Builders Area
129	KHODNA KHURD	RURAL	Sunpura(Kheri)
130	DELTA-3	URBAN	Delta-2
131	DADRI ROAD TILAPTA	RURAL	Site C (New) Switching cum Substation (DB GIS)

S.No.	FEEDER_NAME	Feeder Type	Name of Substation
132	KP-3	INSTITUTIONAL	Knowledge Park - III
133	NTPC	URBAN	DM Awas (SB GIS)
134	IT ANSAL	Industrial	IT City (DB GIS)
135	U-2 Pump	Pump	Builders Area
136	JUNPAT	RURAL	XU-1
137	SAINI	RURAL	Sunpura(Kheri)
138	INSPIRED SCHOOL	URBAN	Sector 3 (GNIDA)
139	BARAHI MANDIR	MIXED	Surajpur
140	BHUDA ROAD COLONY	RURAL	Site C (New) Switching cum Substation (DB GIS)
141	SAKIPUR	RURAL	Eta (SB GIS)
142	Sec-32 Pi Pump	Pump	Sec PI 1 & 2 (Birondi) (DB GIS)
143	Phi-4	Urban	CHI-4 (DB GIS)
144	IILM NEW	INSTITUTIONAL	Knowledge Park - II
145	Sector-37 Pump	Pump	Sector - 37
146	VALENOVA PARK	Urban	Techzone-4
147	SKYLINE	INSTITUTIONAL	Knowledge Park - II
148	STREET LIGHT (KP-2)	MIXED	Knowledge Park - II
149	ACCMAN	INSTITUTIONAL	Knowledge Park - III
150	SUTHYANA	RURAL	Lakhnawali
151	D.P.S	Urban	Sector - 37
152	TATA TISCO	URBAN	Beta-1
153	MALAKPUR	RURAL	Lakhnawali
154	SURAJPUR MARKET	MIXED	Surajpur
155	OASIS	INDUSTRIAL	Zeta-1 (DB GIS)
156	VSK GARDEN	URBAN	Knowledge Park - III
157	LAKHNAWALI	RURAL	Lakhnawali
158	DLF SCHOOL	MIXED	Zeta-1 (DB GIS)
159	NATURE MIRACLE	Industrial	KP-5 ESS 10 (DB GIS)
160	ROUNI	Rural	Girdharpur
161	KP-4 SUBSTATION-2	URBAN	Sec PI 1 & 2 (Birondi) (DB GIS)
162	Jackson (New)	INDUSTRIAL	Ecotech-15
163	HEAD OFFICE	URBAN	Alpha-1
164	Chi-4 Pump	Pump	CHI-4 (DB GIS)
165	Sector-10	Urban	KP-5 ESS 2 (DB GIS)
166	P-6	Urban	Builders Area
167	Kherpur Gujjar	Rural	KP-5 ESS 2 (DB GIS)
168	Kasna Market	Rural	Ecotech Extension-1
169	Rohan Motors	INDUSTRIAL	Ecotech-2 (DB GIS)
170	Sigma-2 S/s-5	Mixed	Sigma-4
171	Parasdeep	Urban	Sector - 37
172	P-3	Urban	Builders Area
173	DELTA-1 A POCKET	URBAN	Delta-1
174	Ansai Housing	URBAN	Site C (New) Switching cum Substation (DB GIS)
175	Chi-4 S/s-2	Urban	CHI-3

S.No.	FEEDER_NAME	Feeder Type	Name of Substation
176	Chi-5	Urban	CHI-3
177	Hindustan	INDUSTRIAL	Site C (New) Switching cum Substation (DB GIS)
178	GULISTANPUR	RURAL	Site C (New) Switching cum Substation (DB GIS)
179	C.M MARKET	MIXED	Gamma-1
180	VEDPURA	RURAL	Sunpura(Kheri)
181	Xu-1	Urban	XU-1
182	SHEORAJPUR	RURAL	Sunpura(Kheri)
183	KP-4	URBAN	Delta-2
184	Swarnagari	Urban	Sector - 37
185	Sec-36 S/s-4	Urban	Sector - 37
186	Chi-3 & Society	Urban	CHI-3
187	Aichar	Rural	Sector - 37
188	JAL VAYU VIHAR	Urban	P3
189	Sigma-1,2,3	Urban	Sector - 37
190	TILAPTA CANAL	RURAL	Container Corporation
191	IILM OLD	INSTITUTIONAL	Knowledge Park - II
192	IIMT COLLEGE	INSTITUTIONAL	Knowledge Park - III
193	Supertech Czar	Urban	Sigma-4
194	MU-2	Urban	Omicron-3 (AIS)
195	Sec-36 S/s-3	Urban	Sector - 37
196	FHRAI	INSTITUTIONAL	Knowledge Park - III
197	Delta-3 O Pkt	URBAN	Delta-3 Switching cum Station (DB GIS)
198	DM Awas	URBAN	DM Awas (SB GIS)
199	Mathurapur	Rural	Sector - 37
200	Sigma-3	Urban	Sigma-4
201	Dadha	Rural	Ecotech Extension-1
202	Mu-1	Urban	XU-1
203	Rithori	Rural	XU-3 (DB GIS)
204	Mu-2 EWS(NEW)	Urban	Sigma-4
205	Fena	INDUSTRIAL	Site B
206	Sigma-2 S/s-4	Urban	Sigma-4
207	JP ASSOCIATES	URBAN	Delta-1
208	SKA GREEN ARCH	Urban	Sector 16 Residential (DB GIS)
209	Swarannagri Pump	Pump	Swarn Nagari
210	Kashi Ram	Rural	XU-1
211	GAMMA PUMP	PUMP	Gamma-1
212	Sec-37	Urban	Sector - 37
213	XU Pump	Pump	XU-1
214	ETA	URBAN	Eta (SB GIS)
215	DM OFFICE	URBAN	Surajpur
216	Xu-3 A&B Pkt	Urban	XU-3 (DB GIS)
217	Murshadpur	Rural	IT City (DB GIS)
218	Momnathal	Rural	CHI-4 (DB GIS)
219	SAHARA EXPORT	Industrial	EPIP

S.No.	FEEDER_NAME	Feeder Type	Name of Substation
220	Toyo Ink	INDUSTRIAL	Ecotech-15
221	KULESRA	RURAL	Lakhnawali
222	METRO DEPOT	MIXED	Zeta-1 (DB GIS)
223	L&T LIMITED	Industrial	Ecotech Extension-1
224	Udyog Kendra	INDUSTRIAL	Udyog Kendra
225	SARGODHA	Industrial	Sector 36 (Upgradation)
226	AAYAAM	Industrial	EPIP
227	P-8	Urban	Builders Area
228	INDRAPRASTHA	Industrial	Ecoetch-6 (DB GIS)
229	Site-B	INDUSTRIAL	Site B
230	Bulandkhera	Rural	Hatewa
231	Videotax	INDUSTRIAL	Ecotech-15
232	Xu-2	Urban	XU-1
233	SARVOTTAM	Urban	Techzone-4
234	GAUR MANSION	Urban	Sector 2 (GNIDA)
235	Vintage	Industrial	Ecotech Extension-1
236	KHERACHAUGANPUR	RURAL	KP-5 ESS 10 (DB GIS)
237	ROTO PUMP	Industrial	Ecotech-15
238	FUN ZOO TOYS	Industrial	Ecotech-15
239	PANCHAYTAN	Rural	Girdharpur
240	BHANOTA	RURAL	Sunpura(Kheri)
241	PATLAKHERA PTW	Rural	Girdharpur
242	AUTHORITY PUMP	PUMP	Delta-2
243	Sector-16	Urban	Sector 16 Residential (DB GIS)
244	Omicron-1	Urban	Sigma-4
245	Swarnagari S/s No-1	Urban	Swarn Nagari
246	Nimbuss	Urban	CHI-4 (DB GIS)
247	ANS Apartment	Urban	Sec PI 1 & 2 (Birondi) (DB GIS)
248	COMMERCIAL BELT	URBAN	Alpha-1
249	Civil Service	Urban	Builders Area
250	CASA GREEN	Urban	Sector 16 Residential (DB GIS)
251	JAITPUR	URBAN	Sec PI 1 & 2 (Birondi) (DB GIS)
252	TUSYANA	RURAL	ESS-6 KP-5 (DB GIS)
253	Birondi	Rural	Sec PI 1 & 2 (Birondi) (DB GIS)
254	HOLOSTIK INDIA	Industrial	Ecotech Extension-1
255	Xu-3 C Pkt	Urban	XU-3 (DB GIS)
256	HALDONA	MIXED	Knowledge Park - II
257	KHERLI HAFIZPUR	Rural	Girdharpur
258	Modern Transformer	INDUSTRIAL	Site B
259	D.N.V System	Industrial	Ecoetch-6 (DB GIS)
260	Customer Care Center	INSTITUTIONAL	KP-1(Upgradation)
261	SGS UDYOG	Industrial	Ecotech-15
262	Bharat Udyog	Industrial	EPIP
263	HABIBPUR	MIXED	Jalpura
264	GAMMA-1 E POCKET	URBAN	Gamma-1

S.No.	FEEDER_NAME	Feeder Type	Name of Substation
265	Malhotra Electronic	INDUSTRIAL	Ecotech-15
266	MAKODA	RURAL	Zeta-1 (DB GIS)
267	TIMES GROUP	Industrial	XU-3 (DB GIS)
268	Kaladham	INSTITUTIONAL	Knowledge Park - II
269	DMIC STREET LIGHT 1	Urban	DMIC Substation
270	DMIC STREET LIGHT 2	Urban	DMIC Substation
271	DMIC PUMP-1	Urban	DMIC Substation

4.3.2 Single Line Diagram

Whereas it is not possible to describe single line diagram of large network, NPCL System Network Diagram is attached in annexure- VI.

4.3.3 Summary of Electrical Power Distribution Infrastructure

Table 7: Electrical power distribution infrastructure

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	1	1	1	
ii	Number of divisions	NA	NA	NA	
iii	Number of sub-divisions	NA	NA	NA	
iv	Number of feeders	307	307	55	It Include Both 33KV Import Feeder and 11KV Feeders
v	Number of DTs	6028	6028	240	Internal Data Base
vi	Number of consumers	117753	117753	1150	SAP ERP & Internal Data Base
2	Parameters	66kV and above	33kV	11/22kV	LT
a. i.	Number of conventional metered consumers	0	232	1	96573
ii	Number of consumers with 'smart' meters	0	0	0	4044
iii	Number of consumers with 'smart prepaid' meters	0	0	0	3828
iv	Number of consumers with 'AMR' meters	0	0	1234	2137
v	Number of consumers with 'non-smart prepaid' meters	0	0	0	7214
vi	Number of unmetered consumers	0	0	0	2490
vii	Number of total consumers	0	232	1235	116286
b.i.	Number of conventionally metered Distribution Transformers			191	

ii	Number of DTs with communicable meters			182	
iii	Number of unmetered DTs			5655	
iv	Number of total Transformers	0	0	6028	0
c.i.	Number of metered feeders	0	0	0	0
ii	Number of feeders with communicable meters	0	36	271	0
iii	Number of unmetered feeders	0	0	0	0
iv	Number of total feeders	0	36	271	0
d.	Line length (ct km)	0	1104	2711	3419
e.	Length of Aerial Bunched Cables	0	0	125	589
f.	Length of Underground Cables	0	778	894	1892
3	Voltage level	Particulars	MU	Reference	Remarks (Source of data)
i	66kV and above	Long-Term Conventional		Includes input energy for franchisees	
		Medium Conventional			
		Short Term Conventional			
		Banking			
		Long-Term Renewable energy			
		Medium and Short-Term RE		Includes power from bilateral/ PX/ DEEP	
		Captive, open access input		Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisee.	
		Sale of surplus power			

		Quantum of inter-state transmission loss		As confirmed by SLDC, RLDC etc	
		Power procured from inter-state sources	0	Based on data from Form 5	
		Power at state transmission boundary	0		
ii	33kV	Long-Term Conventional	1,157		SAP ERP & Internal Data Base
		Medium Conventional			
		Short Term Conventional	654		SAP ERP & Internal Data Base
		Banking			
		Long-Term Renewable energy	88		SAP ERP & Internal Data Base
		Medium and Short-Term RE	588		SAP ERP & Internal Data Base
		Captive, open access input	43		SAP ERP & Internal Data Base
		Sale of surplus power			
		Quantum of intra-state transmission loss	0		SAP ERP & Internal Data Base
		Power procured from intra-state sources	2,531		SAP ERP & Internal Data Base
iii		Input in DISCOM wires network	2,531		SAP ERP & Internal Data Base
iv	33 kV	Renewable Energy Procurement	7		SAP ERP & Internal Data Base
		Small capacity conventional/ biomass/ hydro plants Procurement			
		Captive, open access input			
v	11 kV	Renewable Energy Procurement	3		SAP ERP & Internal Data Base
		Small capacity conventional/ biomass/ hydro plants Procurement			
		Sales Migration Input			
vi	LT	Renewable Energy Procurement	1		SAP ERP & Internal Data Base
		Sales Migration Input			
vii		Energy Embedded within DISCOM wires network	11		
viii		Total Energy Available/ Input	2,542		

4	Voltage level	Energy Sales Particulars	MU	Reference	
i	LT Level	DISCOM' consumers	505	Include sales to consumers in franchisee areas, unmetered consumers	SAP ERP & Internal Data Base
		Demand from open access, captive		Non DISCOM' s sales	
		Embedded generation used at LT level		Demand from embedded generation at LT level	
		Sale at LT level	505		
		Quantum of LT level losses	-505		SAP ERP & Internal Data Base
		Energy Input at LT level			
ii	11 kV Level	DISCOM' consumers	703	Include sales to consumers in franchisee areas, unmetered consumers	SAP ERP & Internal Data Base
		Demand from open access, captive		Non DISCOM' s sales	
		Embedded generation at 11 kV level used		Demand from embedded generation at 11kV level	
		Sales at 11 kV level	703		
		Quantum of Losses at 11 kV	681		Include the Losses of LT
		Energy input at 11 kV level	1,383		Input of LT level is combined in the 11 KV level
iii	33 kV Level	DISCOM' consumers	1,130	Include sales to consumers in franchisee areas, unmetered consumers	SAP ERP & Internal Data Base

		Demand from open access, captive		Non DISCOM's sales	
		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	1,130		
		Quantum of Losses at 33 kV	27		SAP ERP & Internal Data Base
		Energy input at 33kV Level	1,157		SAP ERP & Internal Data Base
iv	> 33 kV	DISCOM' consumers		Include sales to consumers in franchisee areas, unmetered consumers	
		Demand from open access, captive		Non DISCOM's sales	
		Cross border sale of energy			
		Sale to other DISCOMs			
		Banking			
		Energy input at > 33kV Level			
		Sales at 66kV and above (EHV)	0		
Total Energy Requirement			2,540		
Total Energy Sales			2,338		

Energy Accounting Summary

5	DISCOM	Input (in MU)	Sale (in MU)	Loss (in MU)	Loss %
i	LT				
ii	11 Kv	1,383	1,208	175	12.67%
iii	33 kv	1,157	1,130	27	2.31%

iv	> 33 kv				
6	Open Access, Captive	Input (in MU)	Sale (in MU)	Loss (in MU)	
i	LT				
ii	11 Kv				
iii	33 kv	2	2	0	0.00%
iv	> 33 kv				
	Loss Estimation for DISCOM				
	T&D loss	202			
	D loss	202			
	T&D loss (%)	7.95			
	D loss (%)	7.95			

*Both LT and 11KV losses as DT metering work is in progress.

4.4 Energy accounts and performance in the current year

4.4.1 Voltage Wise Losses

The below tables describe losses incurring at each voltage level

Table 8: Voltage level wise losses

Parameter	> 33kV	33 kV	11 kV	LT level	Total
	A	B	C	D	E
Input Energy (MU)	0	1157	1383		2540
Sales (MU)	0	1130	1208		2338
Losses (MU)	0	27	175		202
% Losses	0	2.31	12.67		7.95
Source	Feeder Report, Sales Report	Feeder Report, Sales Report	Theoretical Loss	Balancing Loss	Calculated
Calculation Method	A= USO-Sales MU	A= USO-Sales MU	A= USO-Sales MU	D= 100-(A+B+C)	

Note- Loss at 11 KV level includes LT loss.

4.4.2 Feeder and DT wise losses

DISCOM is already maintaining the feeder wise input energy monitoring through communicable metering infrastructure. Also, DT metering installation work is in Progress along with maintaining of proper accounting and reconciliation of metering data to assess feeder wise losses at 11KV and below. It is recommended by auditor for engaging suitable technology for automatic meter data storage and loss accounting

4.5 Unit Performance on Energy Consumption and reduction of losses details

4.5.1 DISCOM Purchase Energy

Table 9: Purchase energy

Unit	Year 2017-18	Year 2018-19	Year 2019-20	Year 2020-21	Year 2021-22
Million kWh	1927	2390	2476	2343	2715*

*including the import of Open access consumer beyond DISCOM periphery

4.5.2 Net Input Energy

It is the net energy at DISCOM periphery after adjusting the transmission losses and energy traded

Table 10: Net input energy

Unit	Year 2017-18	Year 2018-19	Year 2019-20	Year 2020-21	Year 2021-22
Million kWh	1812	2014	2267	2196	2540

4.5.3 Total Billed Energy

It is the Net energy billed, adjusted for energy traded

Table 11: Total billed energy

Unit	Year 2017-18	Year 2018-19	Year 2019-20	Year 2020-21	Year 2021-22
Million kWh	1668	1850	2081	2012	2338

4.5.4 Transmission & Distribution loss

It is the total T & D losses incurred for specific financial year.

Table 12: T&D loss

Unit	Year 2017-18	Year 2018-19	Year 2019-20	Year 2020-21	Year 2021-22
Million kWh	145	164	187	184	202
%	7.99	8.15	8.23	8.39	7.95

Note -

T&D Loss in MUs = Net Input Energy at DISCOM periphery in MUs - Total Billed Energy in MUs

4.5.5 Category wise energy and per capita consumption

Table 13: Category wise per capita consumption

Sr No.	Year	Consumer Category	No. of Consumer	Connected load Demand (MW)	% Connected load	Energy sold Mus
1	2021-22	Residential	106390	510.13	41%	694.48
		Agriculture	1061	5.36	0%	14.64
		Comm-LT	7669	123.65	10%	153.96
		Comm-HT	1123	568.52	45%	1366.73
		Others	1510	42.57	3%	108.23
		Total	117753	1250.23	100%	2338.04

4.5.6 Detailed Consumer Wise Energy Consumption

Table 14: Consumer wise energy consumption details

(Details of Consumers)						
Summary of Energy						
Period From Apr'22 To Mar'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	LT	upto 440	106184	282	SAP-ERP Internal data Base
2	Commercial	LT	upto 440	3628	40	SAP-ERP Internal data Base
3	IP Sets	LT	upto 440	1059	15	SAP-ERP Internal data Base
4	Water Supply	LT	upto 440	236	14	SAP-ERP Internal data Base
5	Public Lighting	LT	upto 440	405	30	SAP-ERP Internal data Base
6	HT Water Supply	HT	11 kV	24	11	SAP-ERP Internal data Base
7	HT Industrial	HT	33 kV	116	675	SAP-ERP Internal data Base
8	Industrial (Small)	LT	upto 440	3508	103	SAP-ERP Internal data Base
9	Industrial (Medium)	HT	11 kV	768	473	SAP-ERP Internal data Base
10	HT Commercial	HT	11 kV	214	80	SAP-ERP Internal data Base
11	HT Res. Apartments Applicable to all areas	HT	11 kV	124	95	SAP-ERP Internal data Base
12	Mixed Load	LT	upto 440	748	10	SAP-ERP Internal data Base
13	HT Commercial	HT	33 kV	32	138	SAP-ERP Internal data Base
14	HT Water Supply	HT	33 kV	1	0	SAP-ERP Internal data Base
15	HT Res. Apartment	HT	33 kV	82	317	SAP-ERP Internal data Base

16	Public Lighting	HT	11 kV	7	7	SAP-ERP Internal data Base
17	Institutions	LT	upto 440	518	11	SAP-ERP Internal data Base
18	Institutions	HT	11 kV	8	1	SAP-ERP Internal data Base
19	IP Sets	HT	11 kV	2	0	SAP-ERP Internal data Base
20	Mixed Load	HT	11 kV	88	36	SAP-ERP Internal data Base
21	Mixed Load	HT	33 kV	1	0	SAP-ERP Internal data Base
	Total			117753	2338	

4.5.7 Energy Consumption and reduction of losses details

- The DISCOM has 8.39% of T & D losses in FY2020-21 which is reduced to 7.95% in FY2021-22.
- It can be seen that major consumption of units in licensee area consists of HT connections accounting to nearly 58% of total units billed. It is understood that since supply of these consumers are largely through 33/11 kV voltage level, distribution and metering losses are considerably low.
- In FY 2021-22, NPCL has an overall AT&C loss is 7.64% , in which the T & D loss is 7.95 % and Collection efficiency is 100.34%.
- The overall A T & C loss of the DISCOM are considerable lower than that of the average A T & C loss benchmark of 20.66% (CEA Report, Oct 2020)

5 Energy Conservation Measures

5.1 Energy Conservation Measures already taken

FY 2017-18

1. Unmetered to metered conversion for promoting both energy conservation and commercialization, improving load management and cultivating cost-consciousness:
 - a) Installation of meters for rural household connections.
 - b) Installation of meters for street light and other public service connections.
2. Continued awareness campaigns initiative to promote use of inverter ACs, star rated electrical equipment in domestic households, commercial establishments as well as in industries. Larger populace has started using LED lights due to significant fall in prices. Camps were organized at schools to promote energy conservation as well as energy efficiency measures amongst children.
3. Continued facilitating Industrial consumers to convert their DG sets on to Gas Run Generators.

FY 2018-19

1. Efforts are being made continuously to convince the residents of villages to get the meters installed and convert the remaining un-metered connections to metered connections with the aim of promoting energy conservation, commercialization and improve energy accounting resulting in efficient load management and also bring about a sense of cost awareness amongst the consumers. In addition to this, awareness programmes through camps are being organized to promote use of energy efficient appliances and importance of turning off switches when not in use. To promote better energy accounting, the following has been undertaken:
 - a) All new connections in rural household and agricultural pump sets released have been done through the use of LT Armored cable and Meters.
 - b) Installation of meters for street light and other public service connections.
2. LED lights have been distributed through CSR initiative amongst rural households. Camps were organized at schools to promote education for energy conservation as well as energy efficiency measures amongst children.
3. Continued facilitating Industrial consumers to convert their DG sets on to Gas Run Generators.

FY 2019-20

It is a continuous endeavor to make people especially in rural areas aware of the benefits of conservation of energy. "Customer Contact Programmes", Camps were organized in villages and awareness build up through Camps were made to promote use of energy efficient appliances and importance of switching off devices when not in use. Efforts are being made continuously by convincing the residents of villages to get electricity through metered connections only and convert the existing un-metered connections to metered connections with the aim of promoting energy conservation, commercialization and improve energy accounting resulting in efficient load management and also bring about a sense of cost awareness amongst the consumers. 41 numbers of new service Camps were organized in various villages in Greater Noida to facilitate ease of getting new service connections. 215 numbers of unmetered connections have been converted to metered connections in both Domestic and Agricultural segment. To promote energy conservation and accounting, the following has been undertaken:

- a) All new connections in rural household and agricultural pump sets released have been done through the use of LT Armored cable and Meters. Accordingly, 4541 new service connections were released in villages.
 - b) 100 new supply sources for transformer installation were commissioned and the LT network split to cater to the increased load demand and increase the supply reliability and reduce network losses.
 - c) Installation of meters for street light and other public service connections.
2. LED lights have been distributed through CSR initiative amongst rural households.
 4. Implementation of ISO 50001, Energy Management System for efficiently using energy at office premises and successfully achieved certification thereof in February, 2020.

FY 2020-21

1. Promotion of Roof-top Solar Panels, Solar Water Heater, Energy Saving / Reduction of Electricity Wastage and Distribution of Solar lanterns in rural areas, CFL etc.
2. Promotion of Small Solar Plants in Villages, Solar Pumps, Peak Load Management, Energy Storage, Energy Management System Implementation etc.

FY 2021-22

1. Promotion of Roof-top Solar Panels, Solar Water Heater, Energy Saving / Reduction of Electricity Wastage and Distribution of Solar lanterns in rural areas, CFL etc.
2. Installation of energy efficient street lights
3. Say No to Plastic – Distribution of Jute Bags drive
4. Distribution of energy efficient LED bulbs
5. Promotion of Small Solar Plants in Villages, Solar Pumps, Peak Load Management, Energy Storage, Energy Management System Implementation etc.
6. Awareness through Nukkad Natak program on electricity theft reduction.
7. NPCL procuring 27% in FY 2021-22 through renewable energy sources

5.2 Energy Conservation Measures Recommended

Below are two measures recommended for improving technical losses as well improving energy accounting.

1. Replacement of old DTs (installed before 2014) in phase wise manner with BIS Level 2, IS 1180 (Part-1) labelled DTs. At present 4 star rated (amended to Star 1 w.e.f. 1st January 2017) transformers ranging up to 2500 kVA are cost effective for replacement with life span of 25 years. It has been noticed that NPCL is aware of star rated transformers and installing BIS Level 2, IS 1180 (Part-1) & BEE Star – 1 (both are equivalent) from year 2014 onwards. Considering minimum life span of 25 years, NPCL is identifying transformers installed before 2000, which will be replaced in a phased manner.
2. Replacement of conventional meters with digital smart meters at consumer end. It is noticed that NPCL is already replacing the conventional meters in phase wise manner.
3. NPCL already in the process of installation of DT Meter along with regular monitoring and maintaining of data. Feeder wise input energy monitoring through communicable metering infrastructure is already in place. It is recommended to start maintaining feeder wise losses for all the feeders in a time bound manner
4. The percentage metering at DT Level is found 6 %. NPCL should install 100% metering system at DT level for proper energy accounting.

6 Inclusions & Exclusions

It is to be noted that no inclusion and exclusion are made in the report data provided by NPCL during the year 2021-22.

7 Critical Analysis

It is the important indicator of the financial viability of DISCOM operations is the gap between the Average Revenue Realized (ARR) per unit of energy supplied and the Average Cost of Supply (ACS).

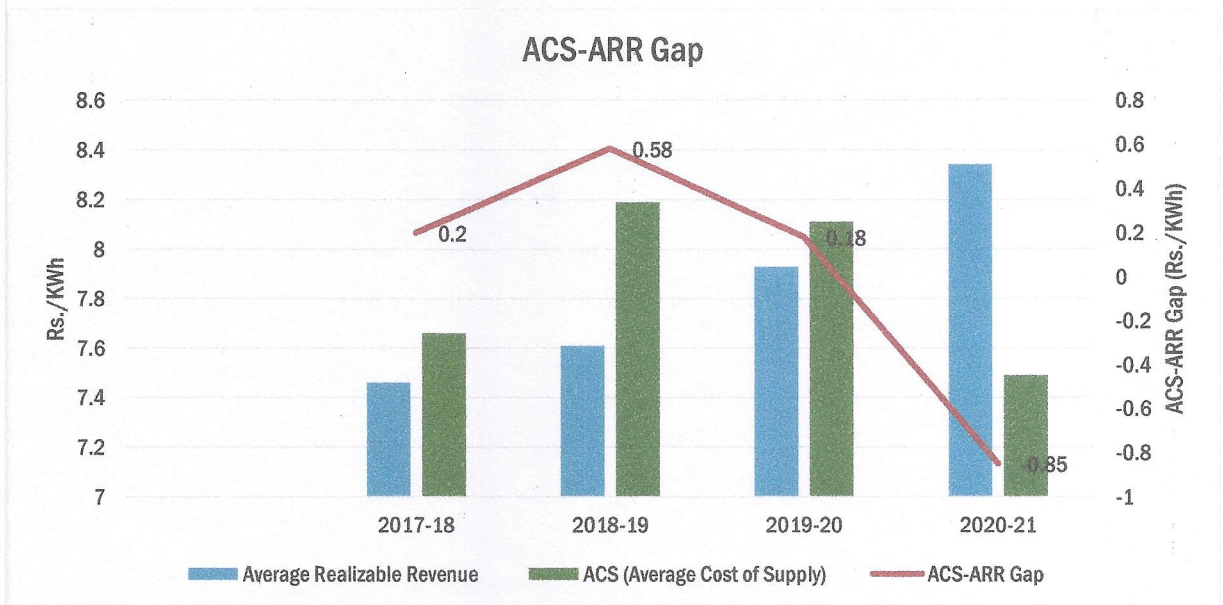
A DISCOM's operations will be profitable if its ARR exceeds the ACS in a given year of operation. ACS is the sum of all costs associated in supplying power such as the cost of purchasing power from various generators (conventional, non-conventional, power exchanges, etc.), cost of operating and maintaining the distribution network (such as service lines and distribution, transformers Etc.), employee cost, depreciation, finance cost and RoE divided by the total sales to consumers.

On the other hand, ARR is the sum of the total revenue earned by charging consumers at specified tariffs for the energy supplied and subsidy received from the state government, divided by the total sales.

The Average Cost supply (Rs/kWh) and Average realized revenue (Rs. /kWh) of NPCL on the basis of Energy Sold for the FY-2017-18, FY-2018-19, FY-2019-20 & FY-2020-21 are mentioned below-

Table 15 ACS - ARR Gap analysis:

Financial Year	Total Sold Energy	Average Realizable Revenue	ACS (Average Cost of Supply)	ACS-ARR Gap (+ Gap/-Surplus)
	(MU)	(INR/kWh)	(INR/kWh)	(INR/kWh)
2017-18	1668	8.00	7.66	(0.34)
2018-19	1850	8.06	8.19	0.13
2019-20	2081	8.17	8.11	(0.05)
2020-21	2012	8.34	7.49	(0.84)



It is observed that T & D loss of DISCOM is range found from 7.99% to 8.39% and there is no space for improvement in the network that further reduce the loss of high quantum. However, energy accounting can be further improved by quantifying DT wise losses, replacement with smart meters at judicious locations and nullifying or offsetting meter errors.

8 Measuring Equipment and Instrument Calibration

NPCL periodically calibrate their import/export energy meters. They have provided calibration certificates for some random feeders, which were verified by the Auditors.

The Calibration Certificates provided by NPCL has been attached in Annexure IX.

JIGNESH P. PATEL
 ACCREDITED ENERGY AUDITOR
 AEA - 0104
 CERTIFIED ENERGY AUDITOR
 EA - 10489

J Patel
 Mr. Jignesh Patel

Accredited Energy Auditor

9 Field Measurement study on Sample Basis

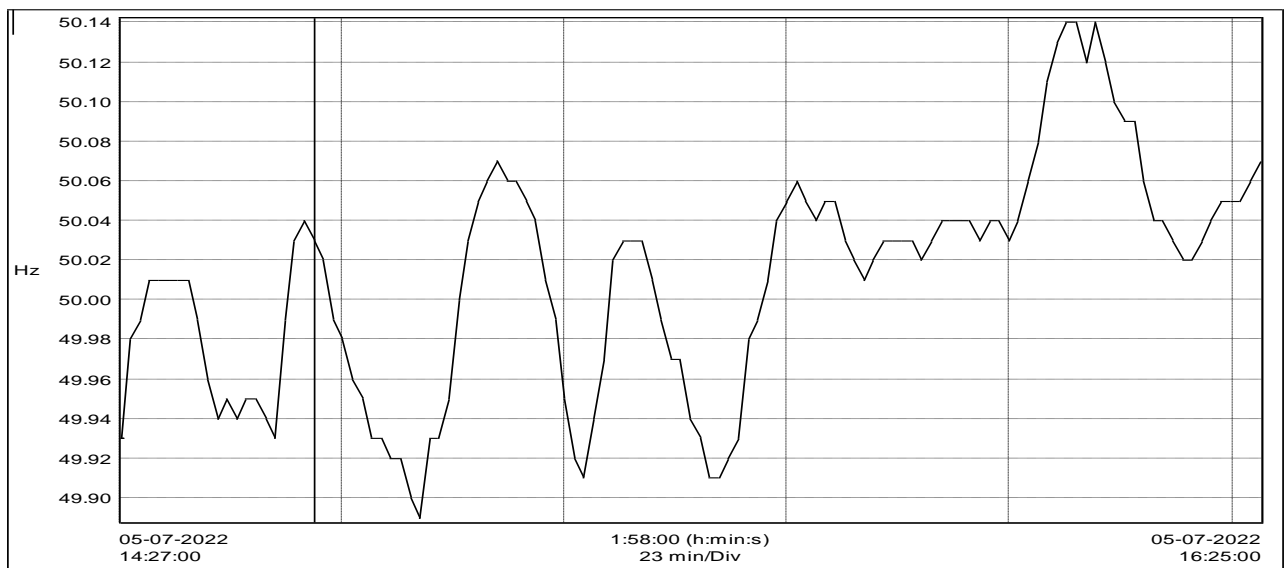
Energy Auditor team has verified NPCL Input Energy meter by installing three phase power analyzer at Incomer feeder on sample basis. Overall substation load and Power quality study has undertaken during field measurement. Three phase power analyzer recorded all the important electrical and power quality parameters i.e. frequency, voltage, current, KW, power factor, harmonics (%THD) in voltage and current, unbalancing in voltage & current etc. The measured data on sample basis can be shown in below table and graph-

1. KP-III Substation Main Incomer

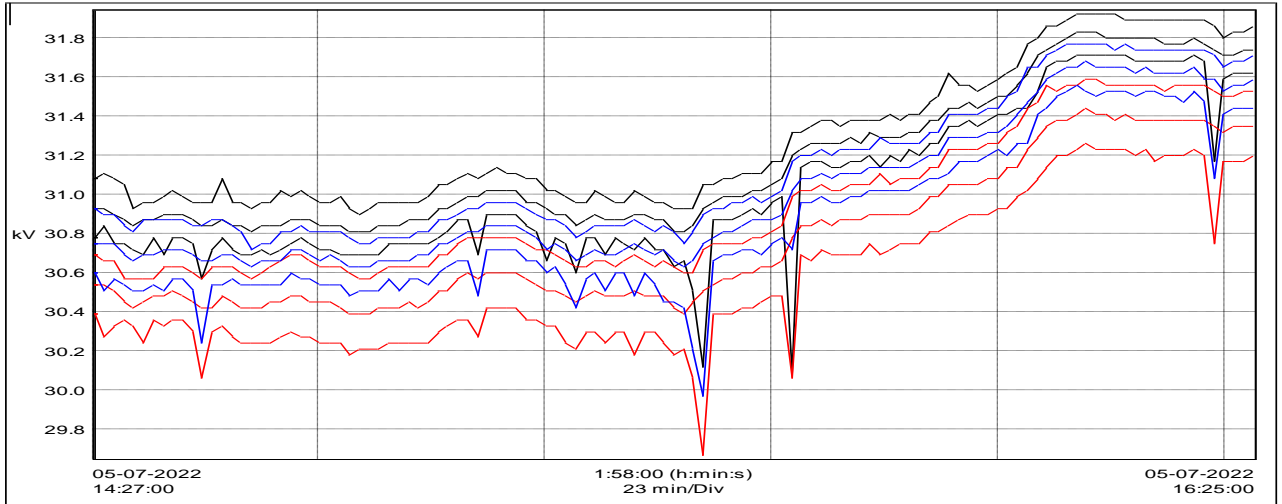
KP-III Main Incomer (33 KV)				
Data	Minimum	Maximum	Average	Remarks
Frequency	49.89	50.14	50.01	Satisfactory
Voltage KV (HT)	30.61	31.65	30.97	
% THDv	0.4	0.6	0.5	
Amps. (HT)	122.24	186.04	160.16	
% THDi	1.1	1.6	1.3	
Load (MW)	6.62	9.8	8.5	
Power Factor	0.984	0.989	0.987	
% Voltage unbalanced	0.6	0.8	0.7	
% Current unbalanced	0.1	1.3	0.75	

Trend of waveform of recording at KP-III 33 KV Main Incomer

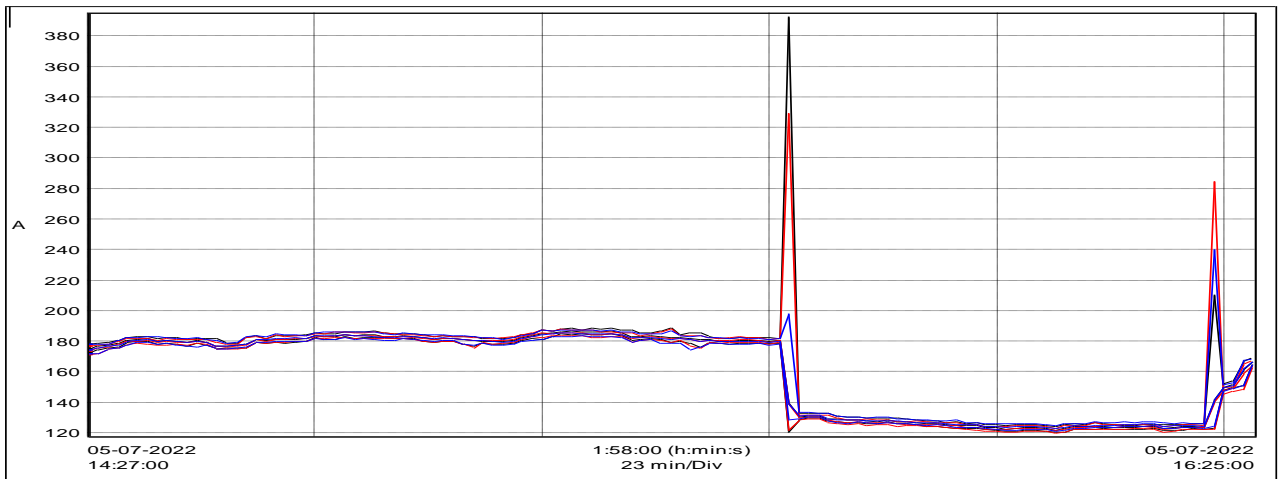
Frequency



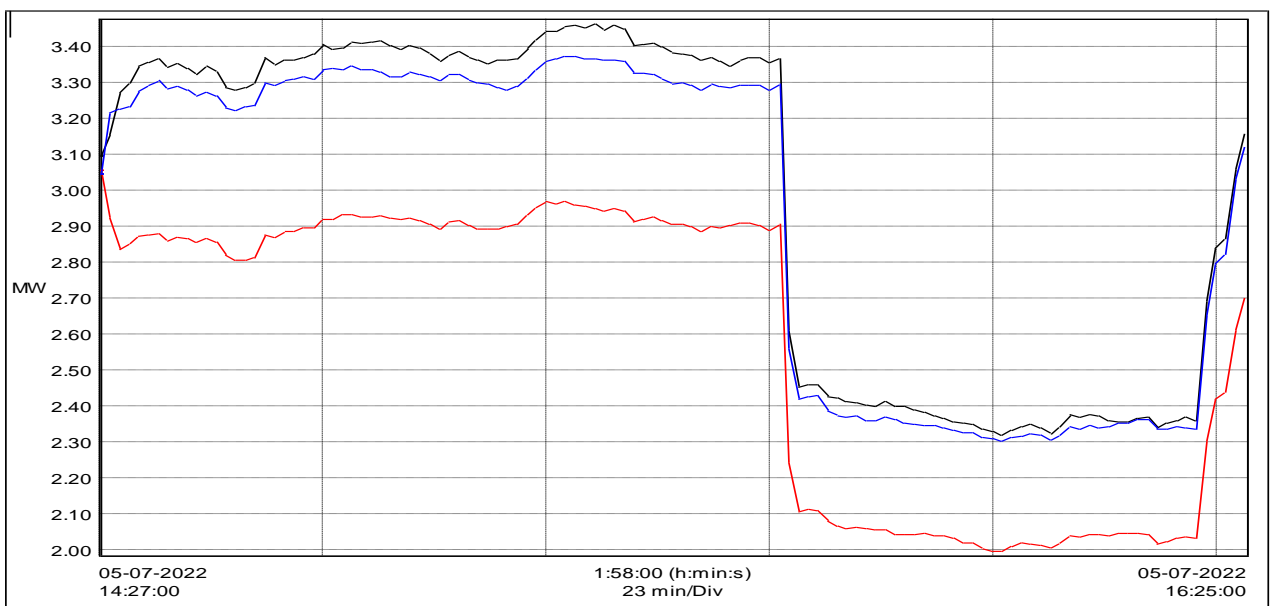
Voltage



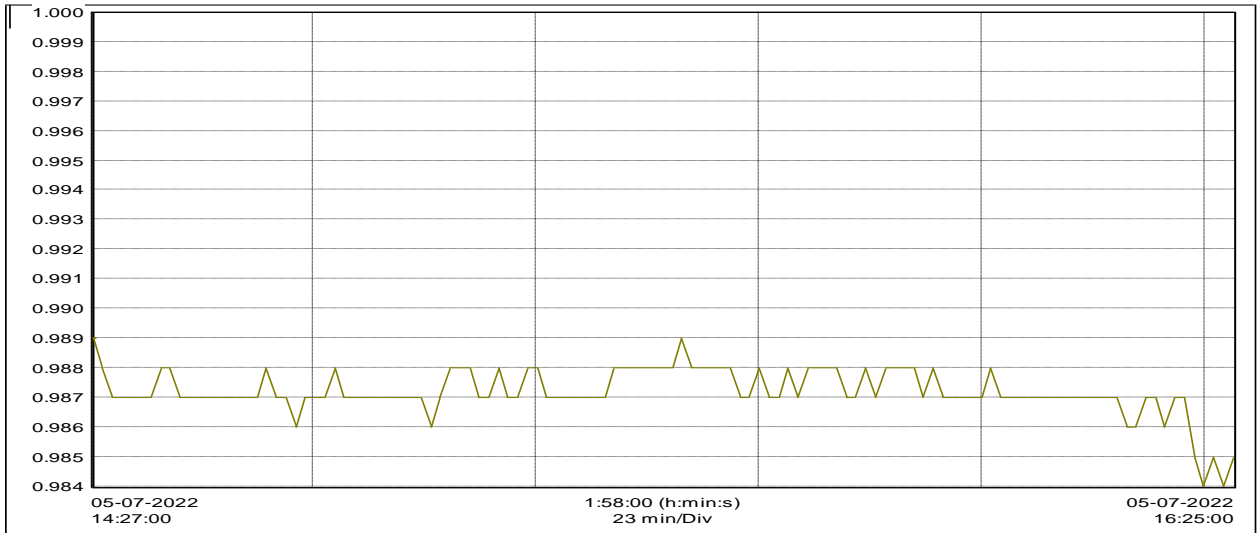
Current



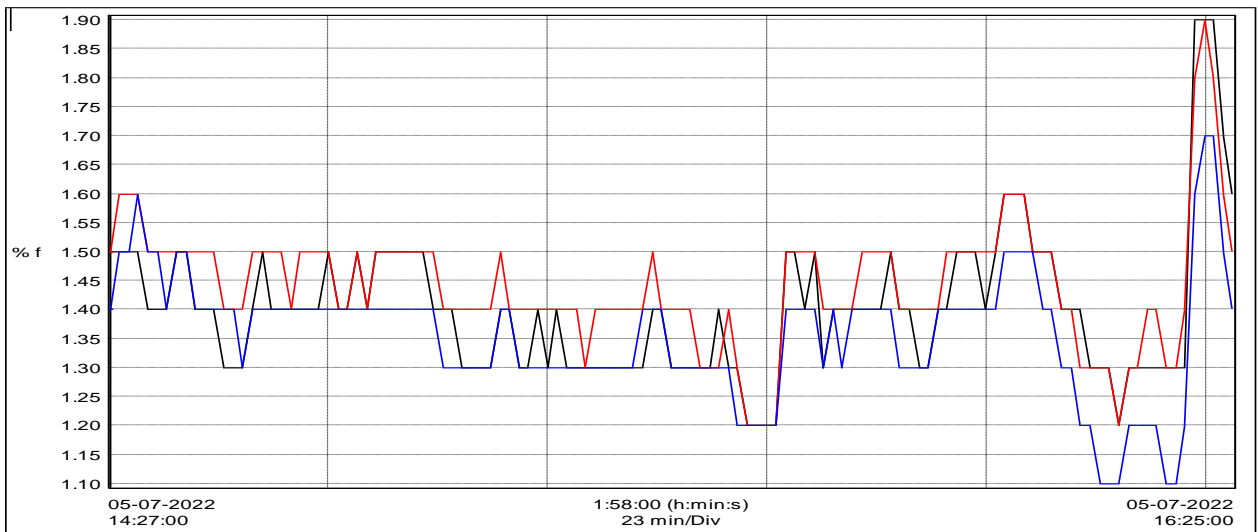
Power (MW)



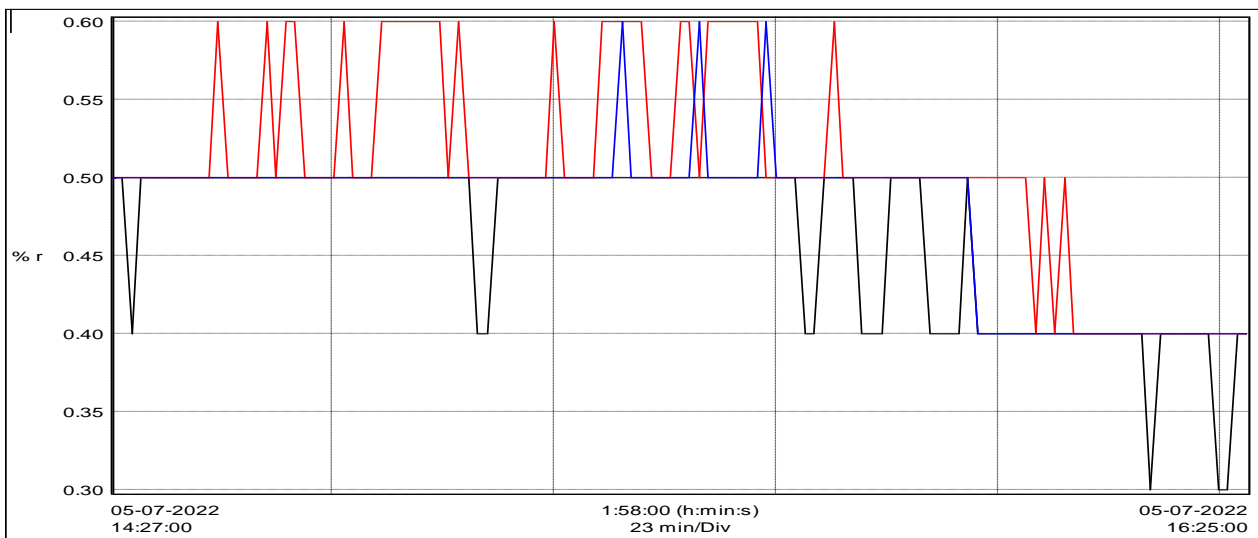
Power Factor



Athd



Vthd



Observation:

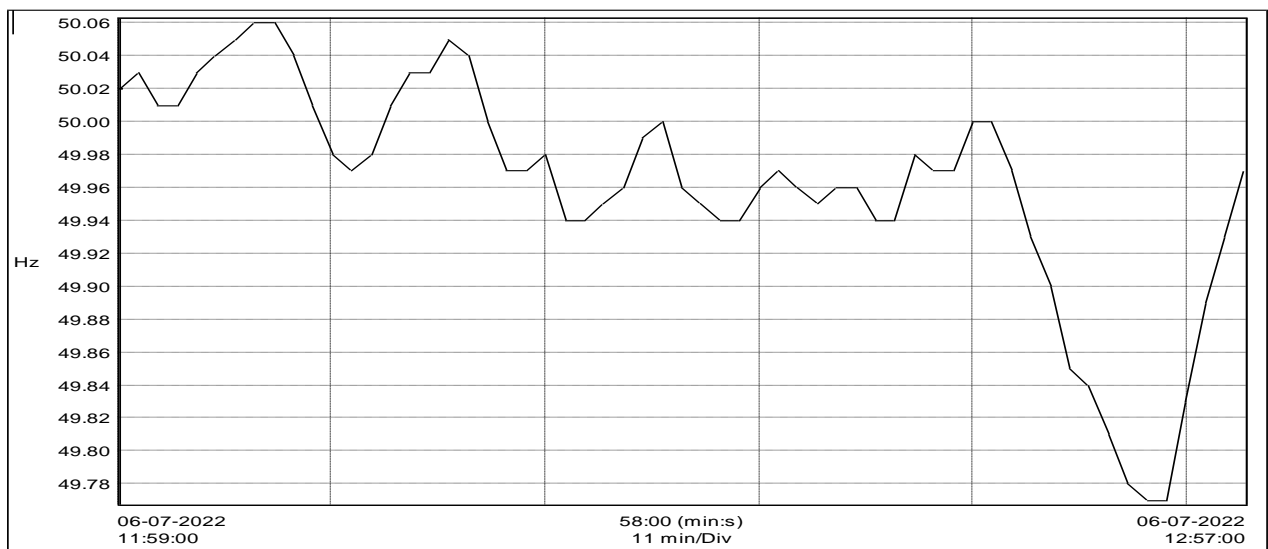
1. During the study of overall load profile, it has been observed that the maximum running load of the substation is 9.8 MW. The average power factor during the time of study has been recorded as 0.984 minimum, 0.987 averages and 0.989 maximum.
2. During the study of load profile, it has been observed that the percentage of harmonic in current and voltage are found in the prescribed limit i.e. THDi in the range of 1.1 -1.6 % and in voltage, THDv is in the range of 0.4 -0.6 %. As per IEEE norms the harmonics in the current should be less than 10% and that of in the voltage should be in the range of less than 5%.
3. It has been observed that over all voltage level is in the range of 30.61 KV to 31.65 KV. The average voltage is 30.97 KV which is at lower side although voltage is within Grid norms and also data is collected during the peak summer season.
4. During Study, Energy Auditor has verified NPCL Import Energy Meter data by installing three phase power analyser and found both meters reading is almost same.

2. Ecotech-2 Substation Main Incomer-1

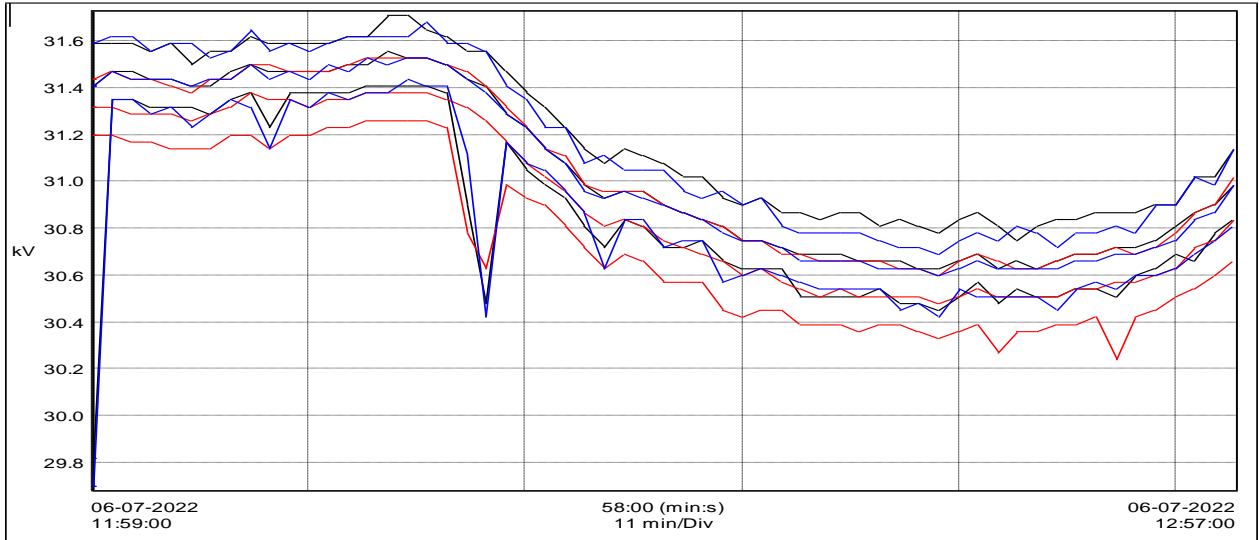
Ecotech-2 Substation Main Incomer-1 (33 KV)				
Data	Minimum	Maximum	Average	Remarks
Frequency	49.77	50.06	49.96	Satisfactory
Voltage KV (HT)	30.57	31.49	30.99	
% THDv	0.3	0.6	0.4	
Amps. (HT)	179.46	285.84	242.23	
% THDi	1.4	2.3	1.7	
Load (MW)	9.71	15.03	12.88	
Power Factor	0.989	0.994	0.992	
% Voltage unbalanced	0.2	0.5	0.3	
% Current unbalanced	0.1	0.5	0.2	

Trend of waveform of recording at Ecotech-2 Substation Main Incomer-1

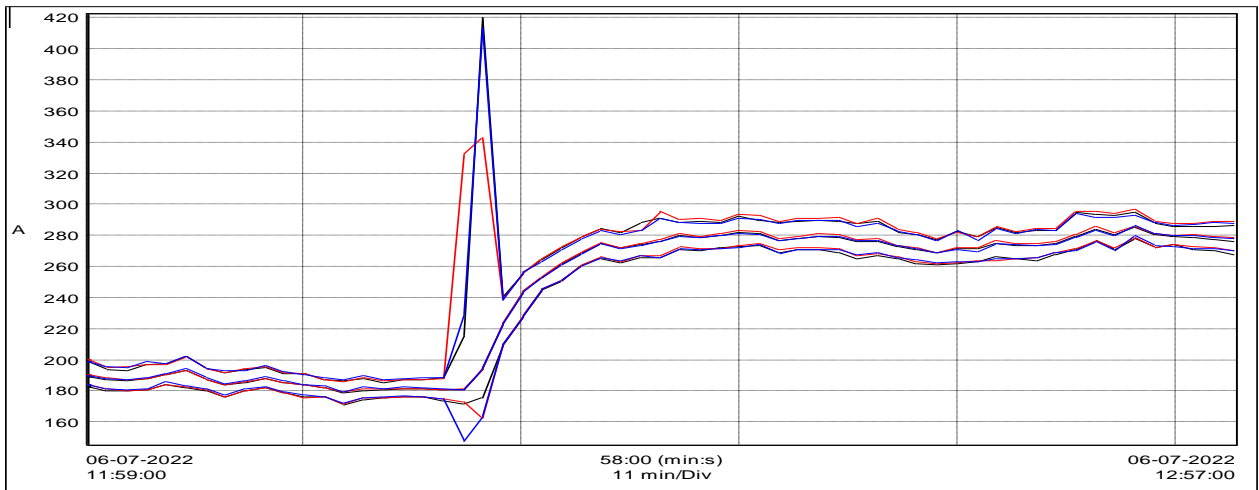
Frequency



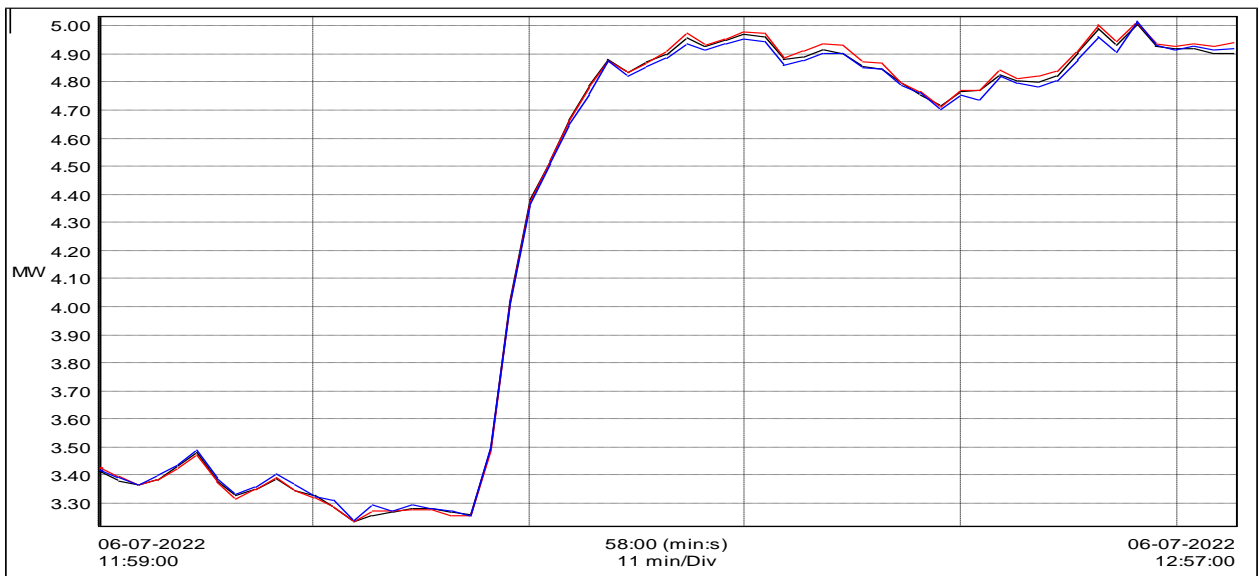
Voltage



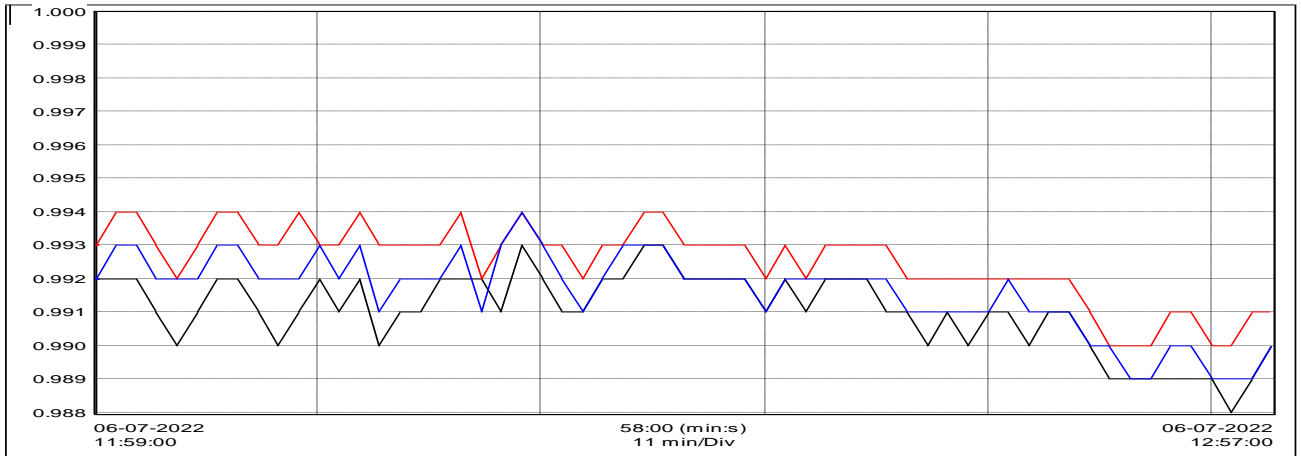
Current



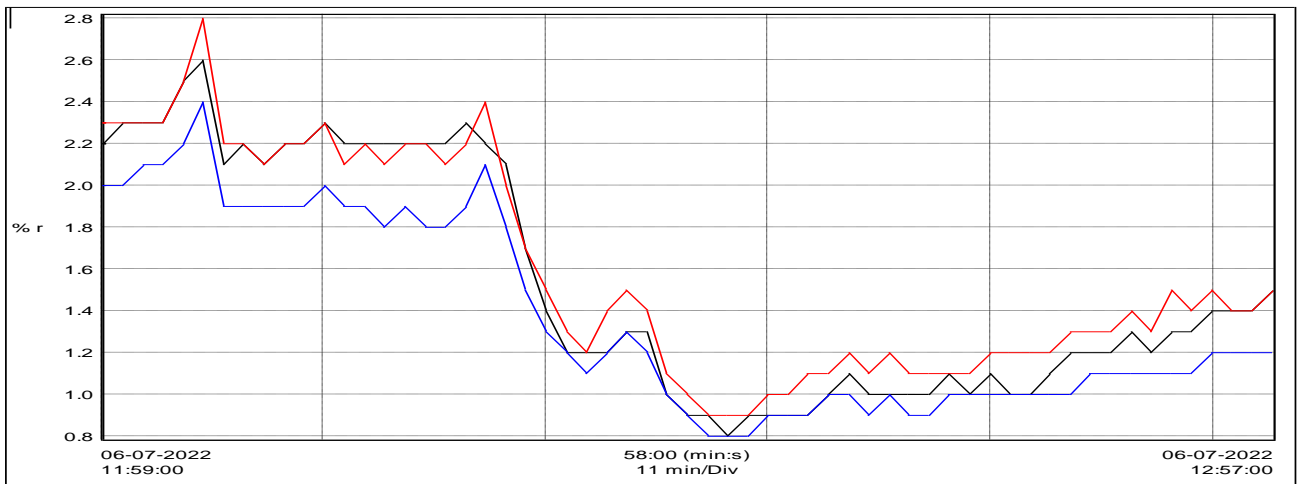
Power(MW)



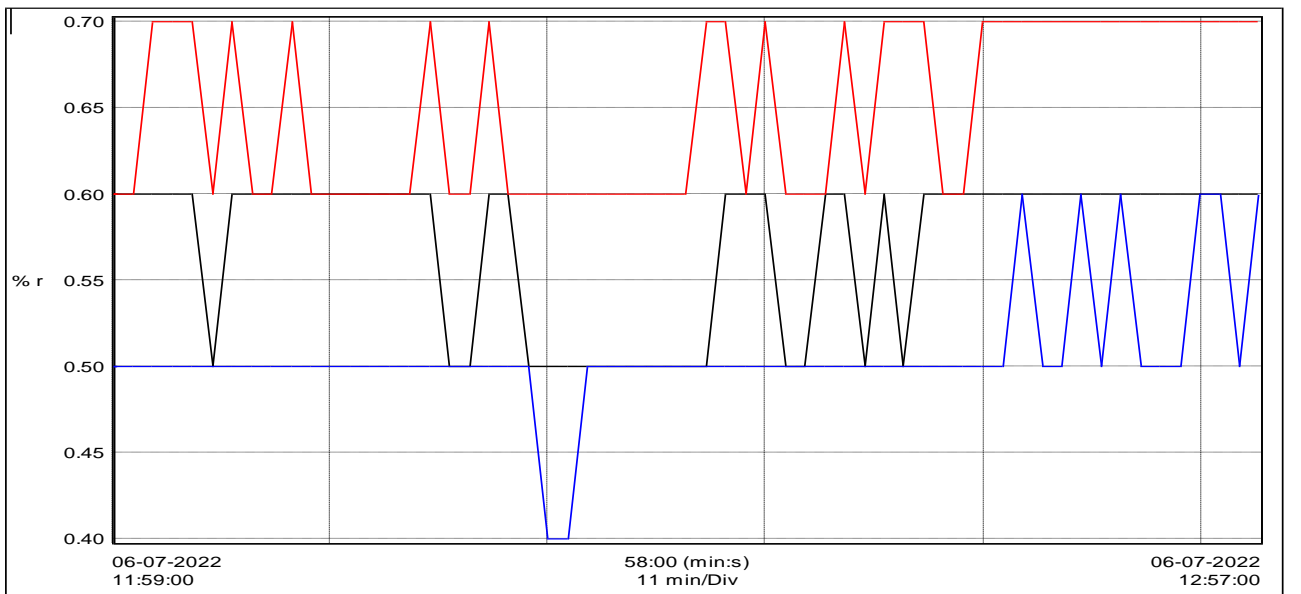
Power factor



THDi



THDv



Observation:

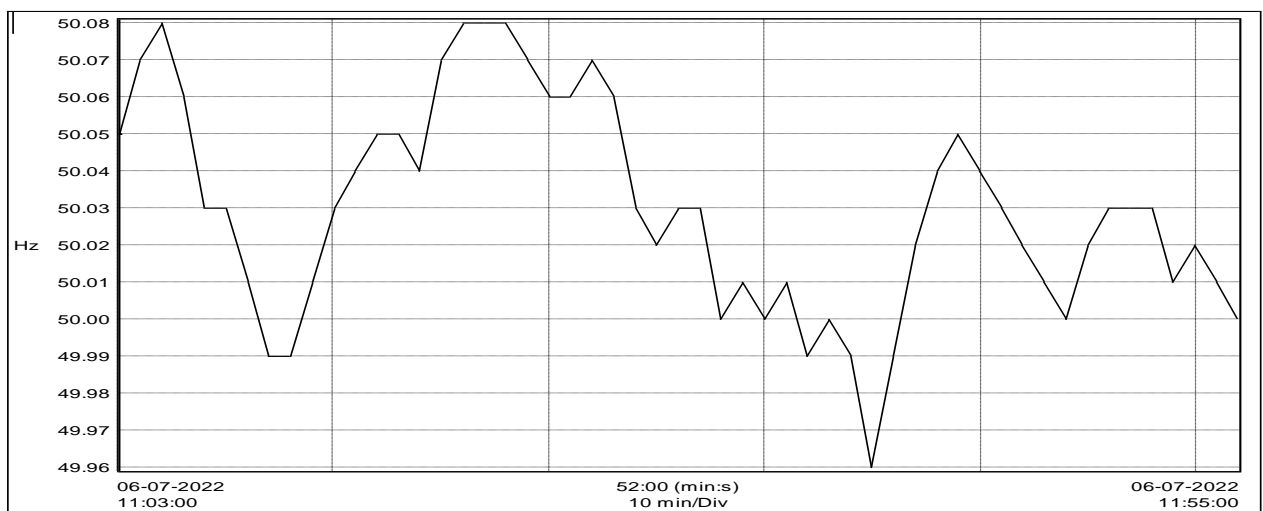
5. During the study of overall load profile, it has been observed that the maximum running load of the substation is 15.03 MW. The average power factor during the time of study has been recorded as 0.989 minimum, 0.992 averages and 0.994 maximum.
6. During the study of load profile, it has been observed that the percentage of harmonic in current and voltage are found in the prescribed limit i.e. THDi in the range of 1.4 -2.3 % and in voltage, THDv is in the range of 0.3 -0.6 %. As per IEEE norms the harmonics in the current should be less than 10% and that of in the voltage should be in the range of less than 5%.
7. It has been observed that over all voltage level is in the range of 30.57 KV to 31.49 KV. The average voltage is 30.99 KV which is at lower side although voltage is within Grid norms and also data is collected during the peak summer season.
8. During Study, Energy Auditor has verified NPCL Import Energy Meter data by installing three phase power analyser and found both meters reading was almost same.

3. Ecotech-2 Substation Main Incomer-2

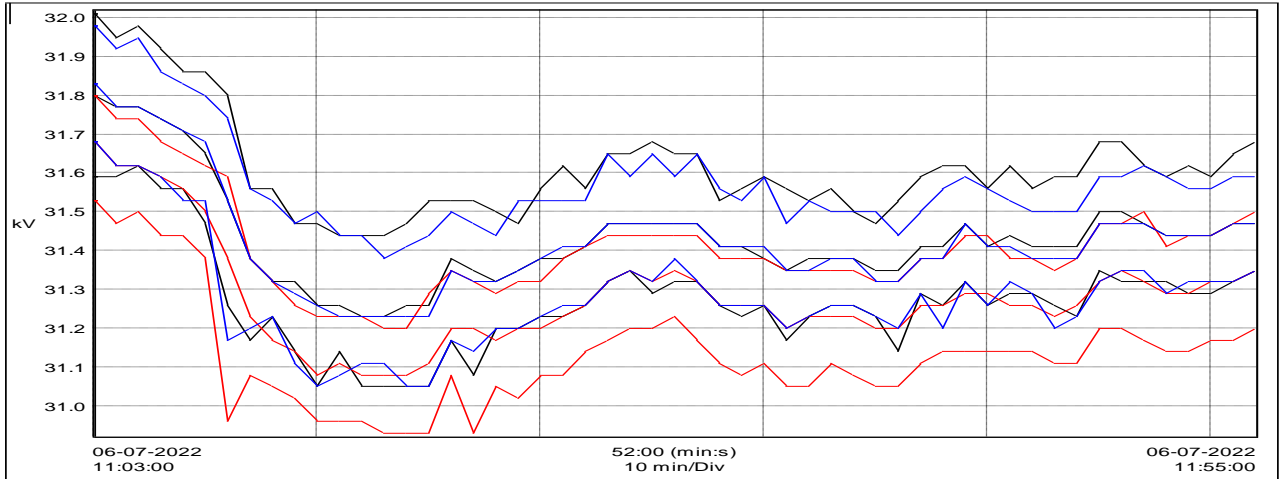
Ecotech-2 Substation Main Incomer-1 (33 KV)				
Data	Minimum	Maximum	Average	Remarks
Frequency	49.96	50.08	50.03	Power Factor is slightly Lower side.
Voltage KV (HT)	31.18	31.77	31.38	
% THDv	0.2	0.4	0.3	
Amps. (HT)	297.12	321.76	308.23	
% THDi	1.5	2.1	1.8	
Load (MW)	15.86	17.06	16.35	
Power Factor	0.973	0.977	0.975	
% Voltage unbalanced	0.2	0.5	0.3	
% Current unbalanced	0.4	0.8	0.5	

Trend of waveform of recording at Ecotech-2 Substation Main Incomer-2

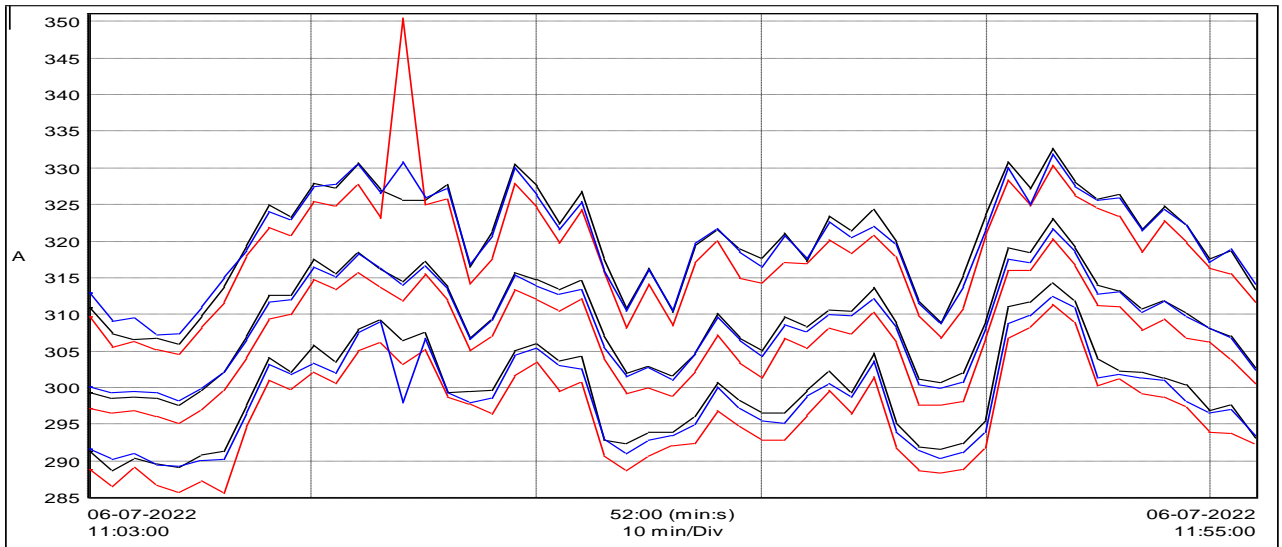
Frequency



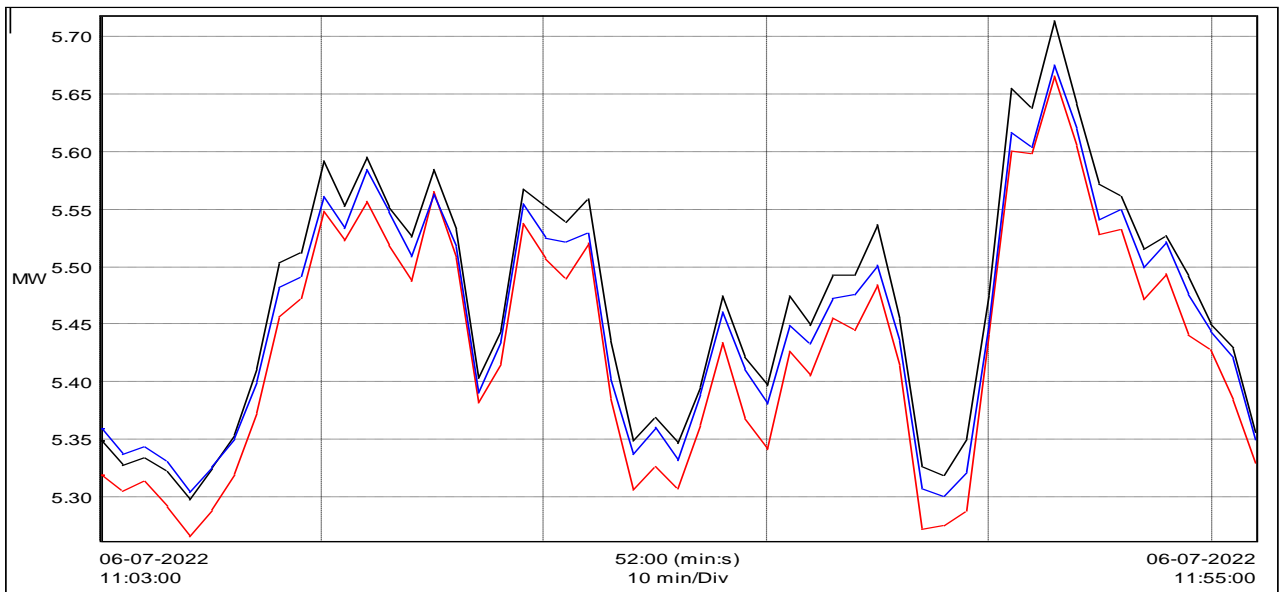
Voltage



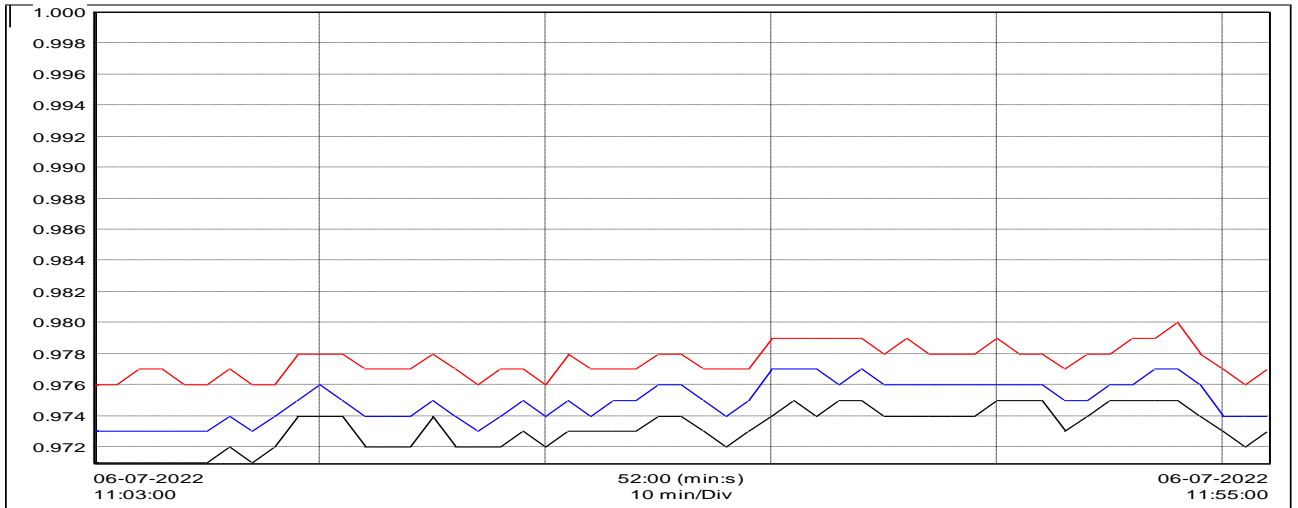
Current



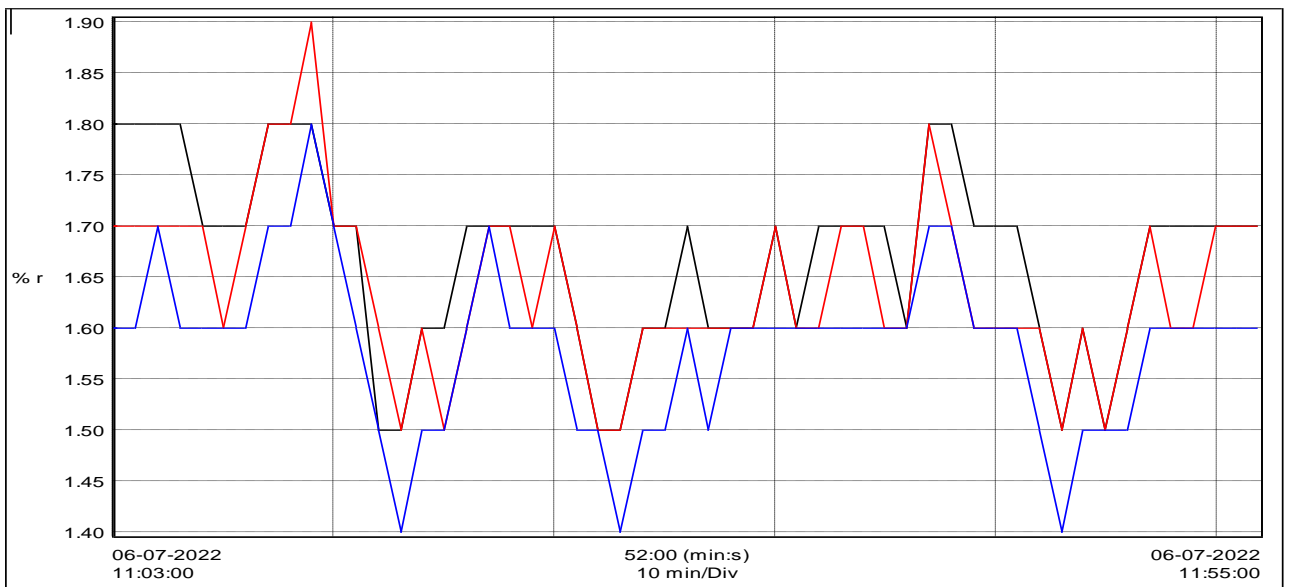
Power (MW)



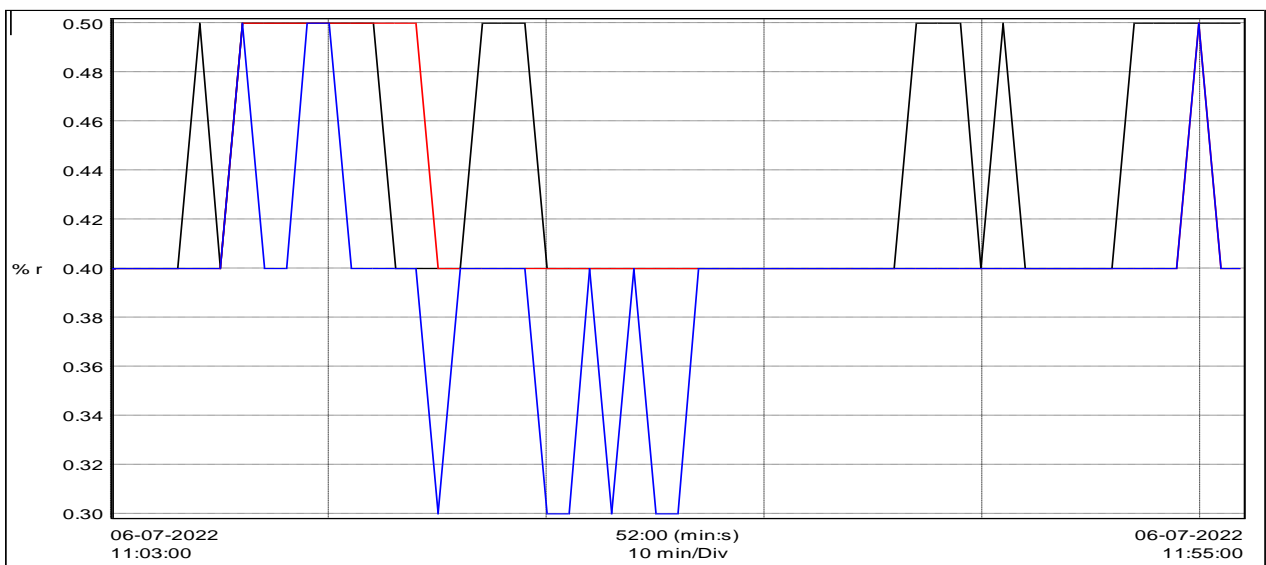
Power Factor



THDi



THDv



Observation:

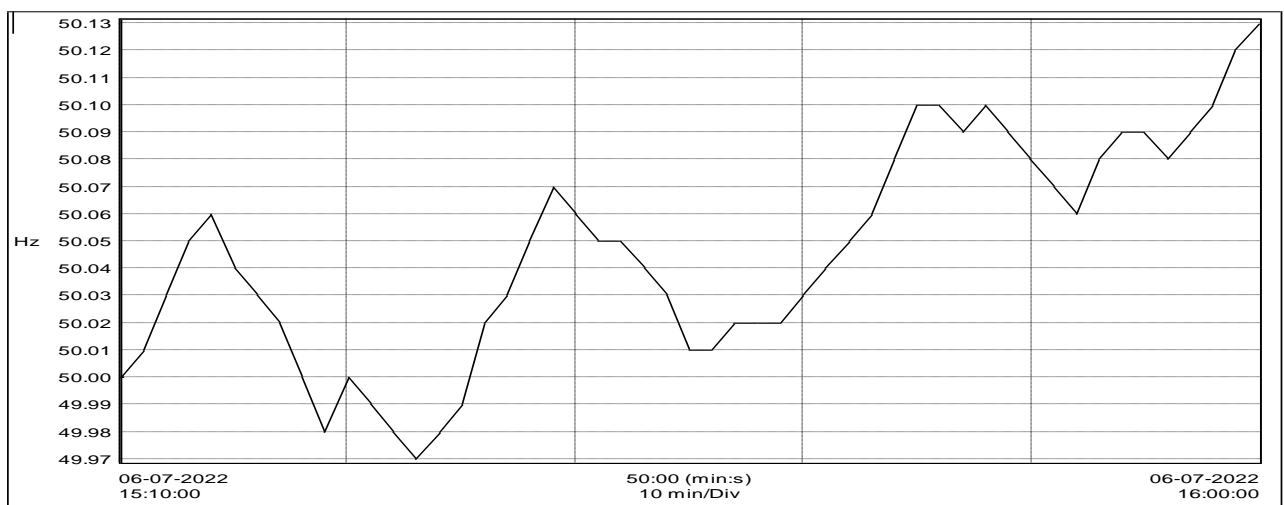
9. During the study of overall load profile, it has been observed that the maximum running load of the substation is 17.06 MW. The average power factor during the time of study has been recorded as 0.973 minimum, 0.975 averages and 0.977 maximum.
10. During the study of load profile, it has been observed that the percentage of harmonic in current and voltage are found in the prescribed limit i.e. THDi in the range of 1.5 -2.1 % and in voltage, THDv is in the range of 0.2 -0.4 %. As per IEEE norms the harmonics in the current should be less than 10% and that of in the voltage should be in the range of less than 5%.
11. It has been observed that over all voltage level is in the range of 31.18 KV to 31.77 KV. The average voltage is 31.38 KV which is at lower side although voltage is within Grid norms and also data is collected during the peak summer season.

4. Ecotech-2 Substation, Sumit Auto Outgoing feeder

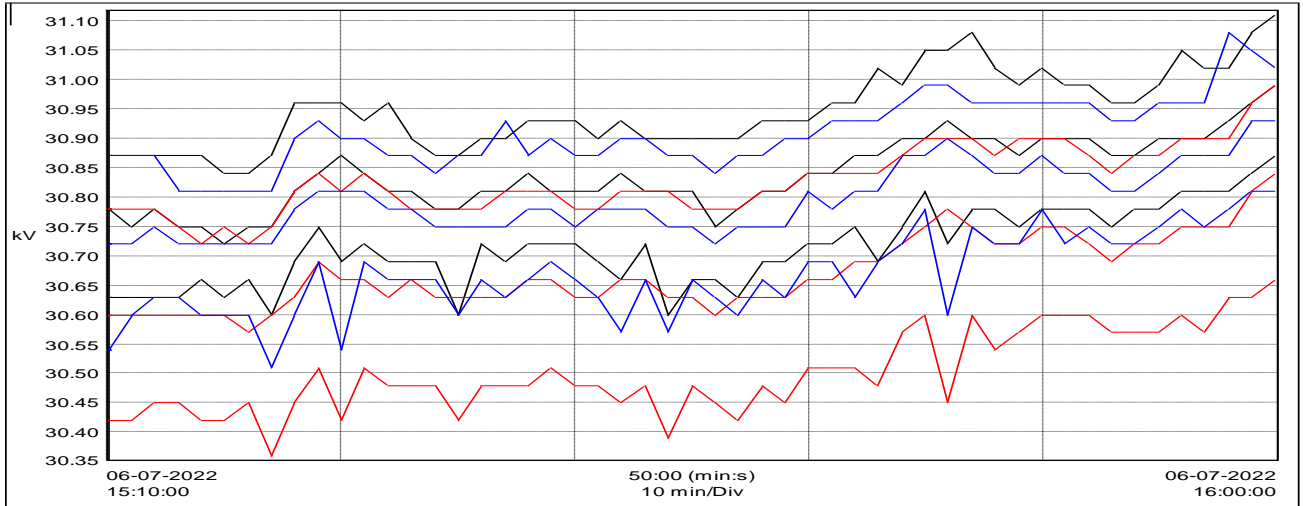
Ecotech-2 Substation Sumit Auto Outgoing Feeder (33 KV)				
Data	Minimum	Maximum	Average	Remarks
Frequency	49.97	50.13	50.05	Satisfactory.
Voltage KV (HT)	30.67	30.76	30.09	
% THDv	0.2	0.4	0.3	
Amps. (HT)	73.65	80.42	78.32	
% THDi	1.3	1.9	1.5	
Load (MW)	3.92	4.39	4.17	
Power Factor	0.996	0.998	0.997	
% Voltage unbalanced	0.1	0.4	0.3	
% Current unbalanced	0.4	0.7	0.6	

Trend of waveform of recording at Ecotech-2 Substation, Sumit outgoing Feeder

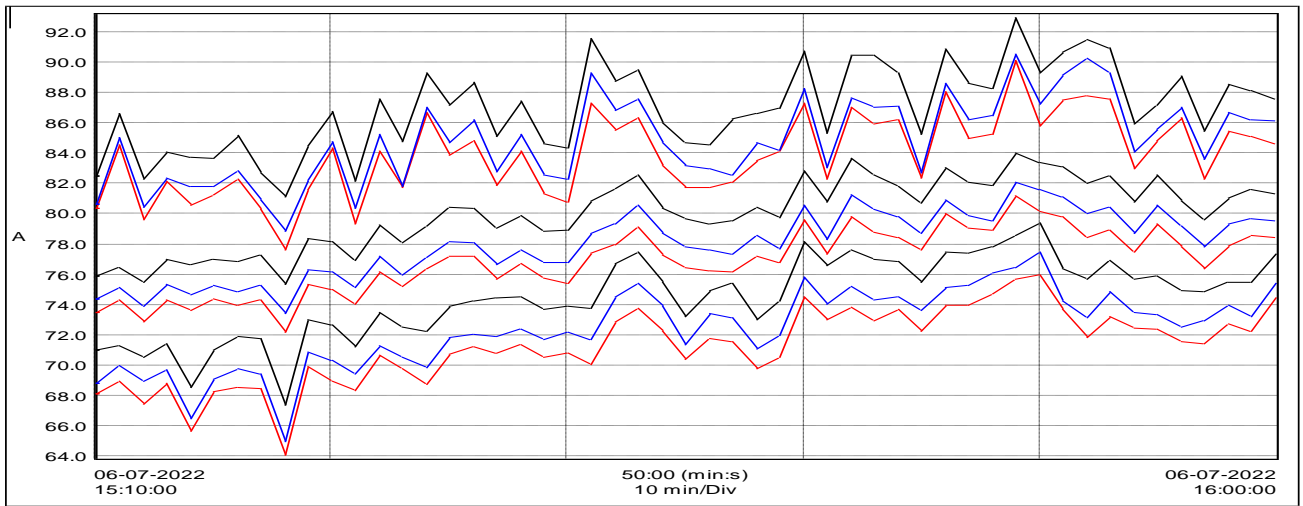
Frequency



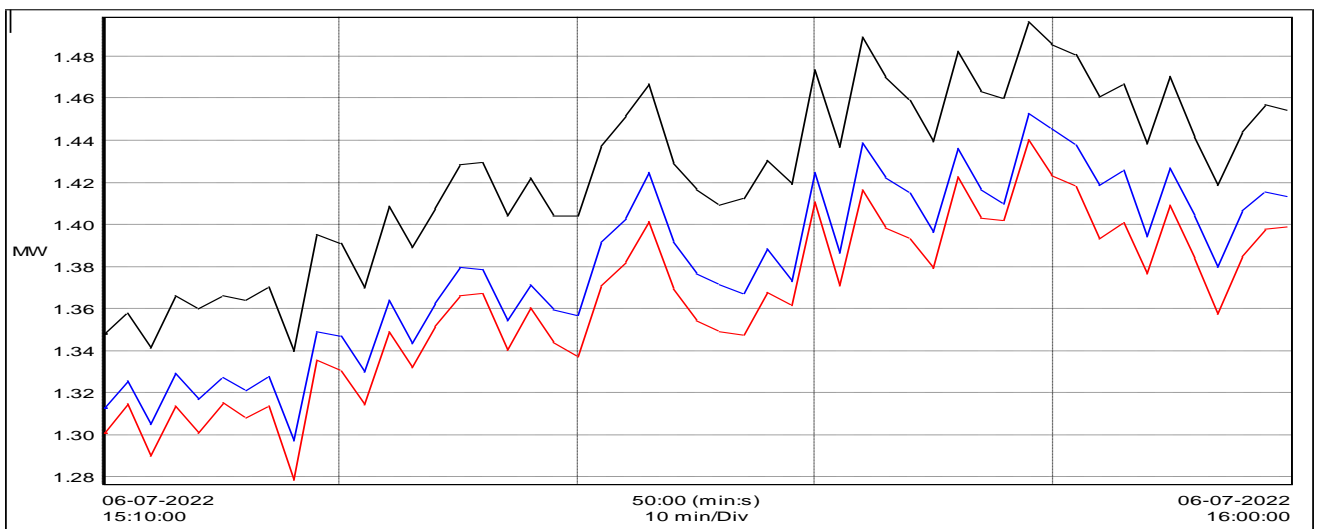
Voltage



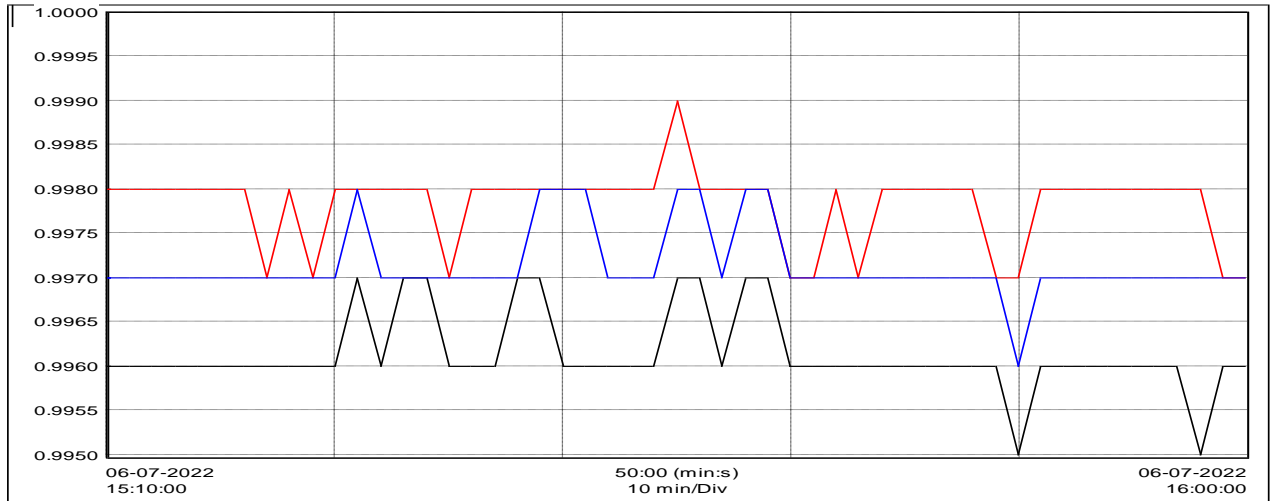
Current



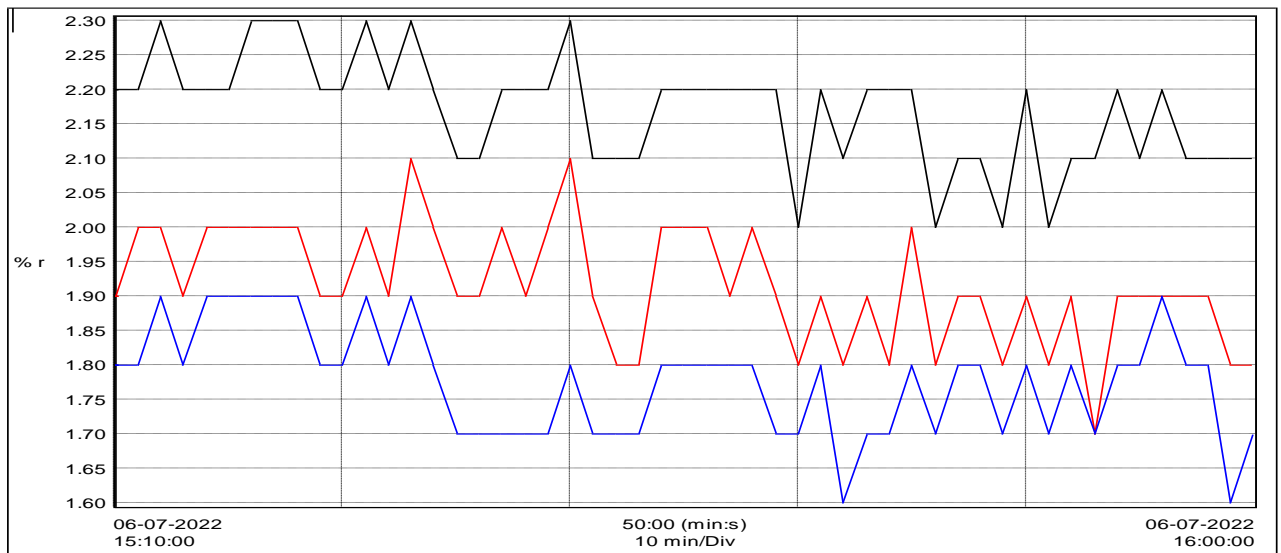
Power (MW)



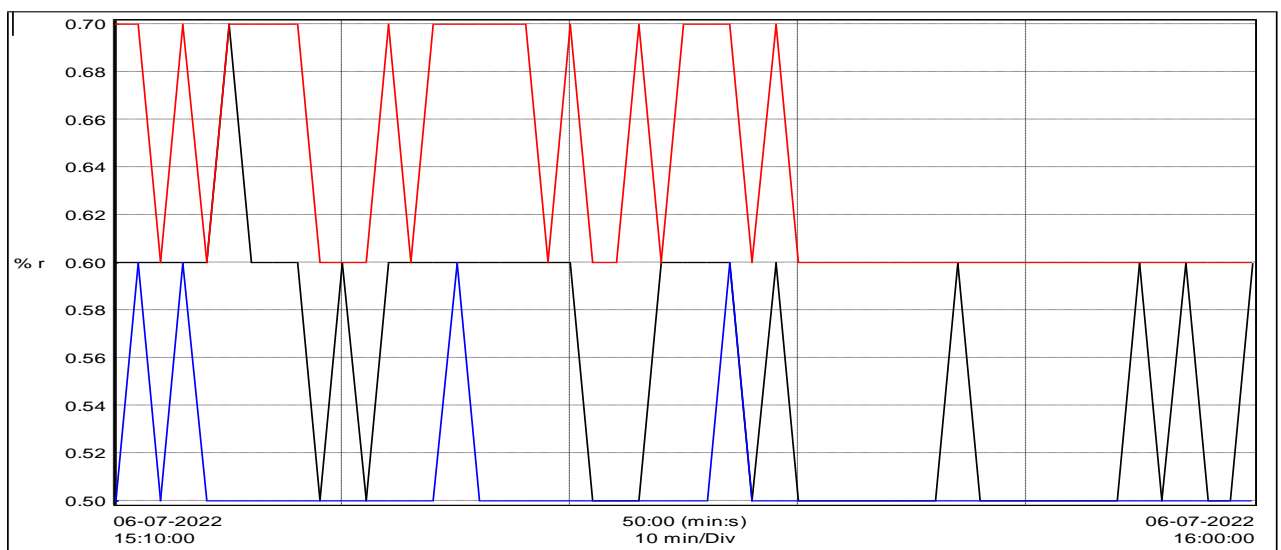
Power factor



THDi



THDv



Observation:

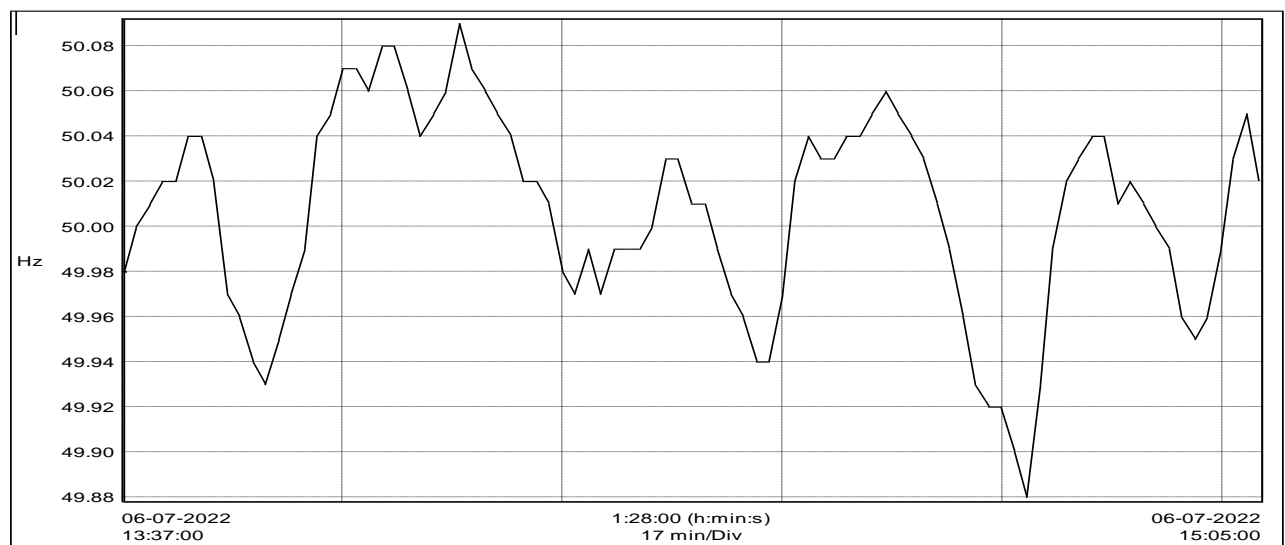
12. During the study of overall load profile, it has been observed that the maximum running load of the feeder is 4.39 MW. The average power factor during the time of study has been recorded as 0.996 minimum, 0.997 averages and 0.998 maximum.
13. During the study of load profile, it has been observed that the percentage of harmonic in current and voltage are found in the prescribed limit i.e. THDi in the range of 1.3 -1.9 % and in voltage, THDv is in the range of 0.2 -0.4 %. As per IEEE norms the harmonics in the current should be less than 10% and that of in the voltage should be in the range of less than 5%.
14. It has been observed that over all voltage level is in the range of 30.67 KV to 30.76 KV. The average voltage is 30.09 KV which is at lower side although voltage is within Grid norms and also data is collected during the peak summer season.

5. Ecotech-2 Substation, Surya food Outgoing feeder

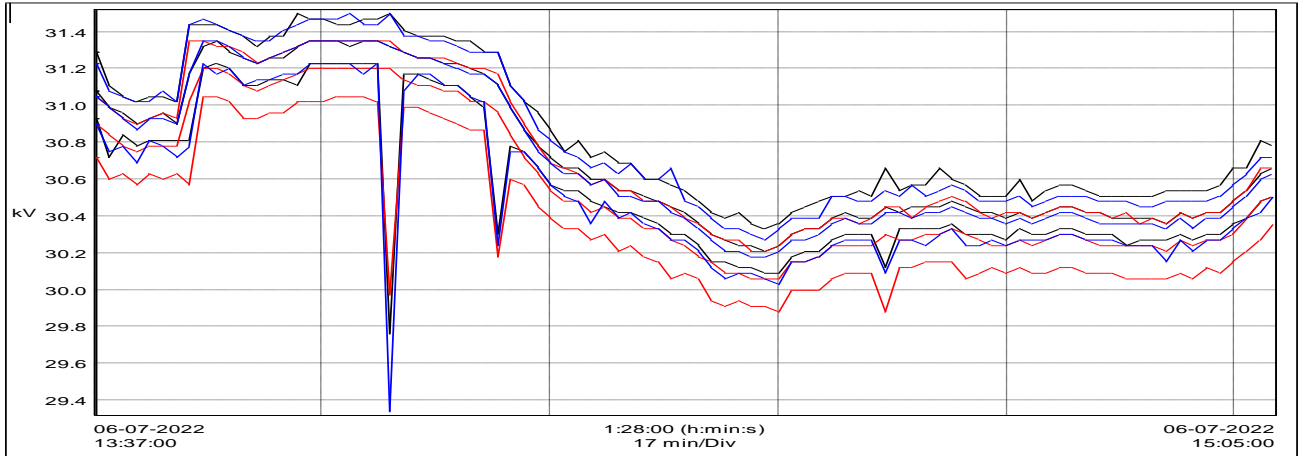
Ecotech-2 Substation Surya food Outgoing Feeder (33 KV)				
Data	Minimum	Maximum	Average	Remarks
Frequency	49.88	50.09	50.01	Satisfactory.
Voltage KV (HT)	30.15	31.30	30.65	
% THDv	0.5	0.7	0.61	
Amps. (HT)	90.56	208.96	168.42	
% THDi	1.1	2.8	1.7	
Load (MW)	4.84	10.95	8.81	
Power Factor	0.984	0.991	0.988	
% Voltage unbalanced	0.1	0.3	0.19	
% Current unbalanced	0.5	1.5	0.99	

Trend of waveform of recording at Ecotech-2 Substation, Surya Food outgoing Feeder

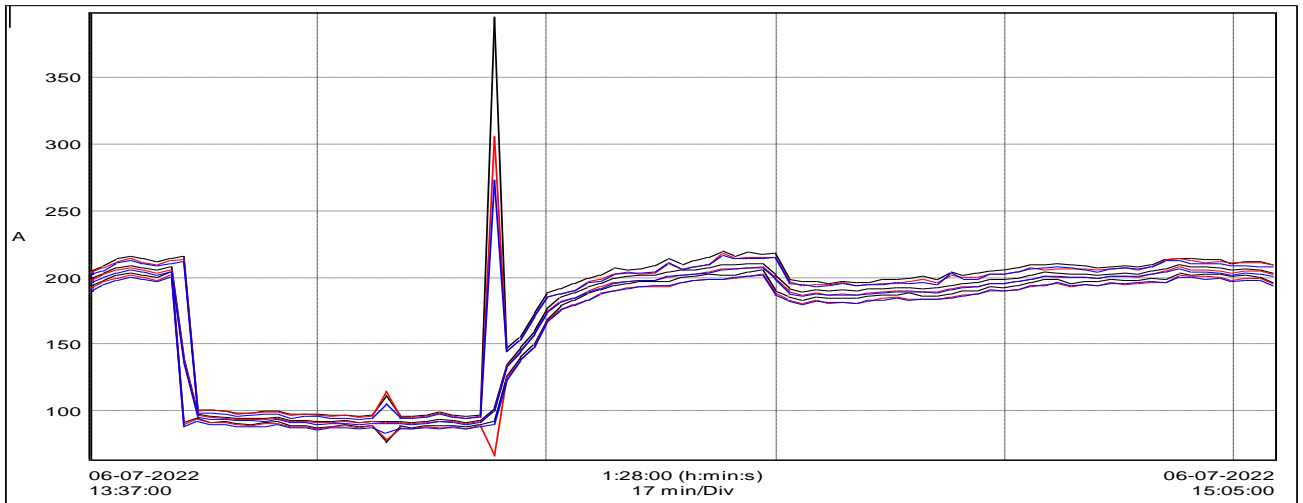
Frequency



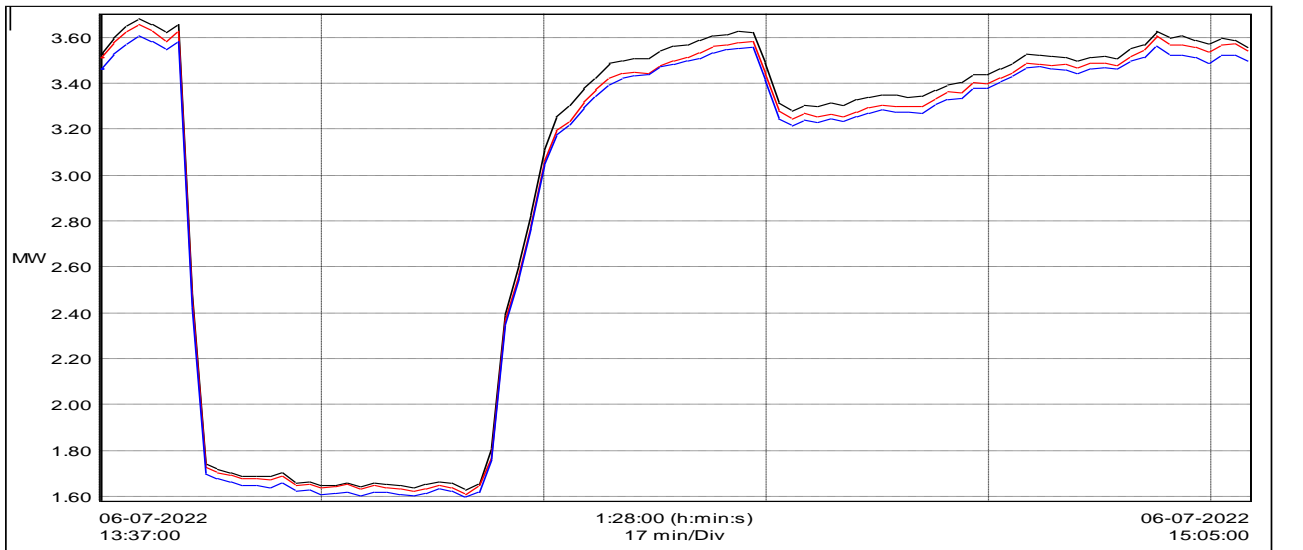
Voltage



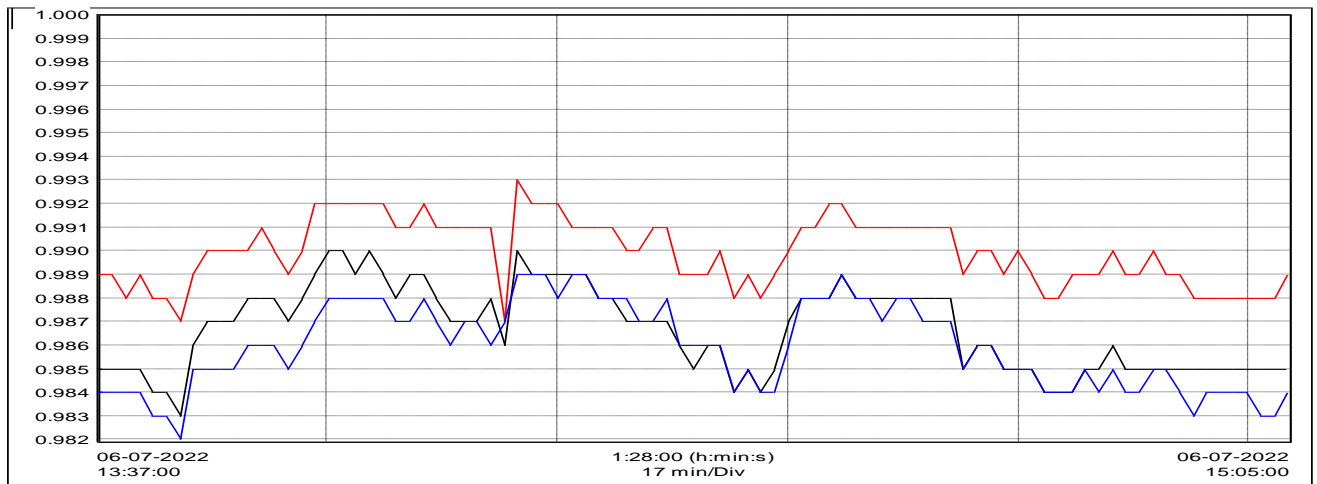
Current



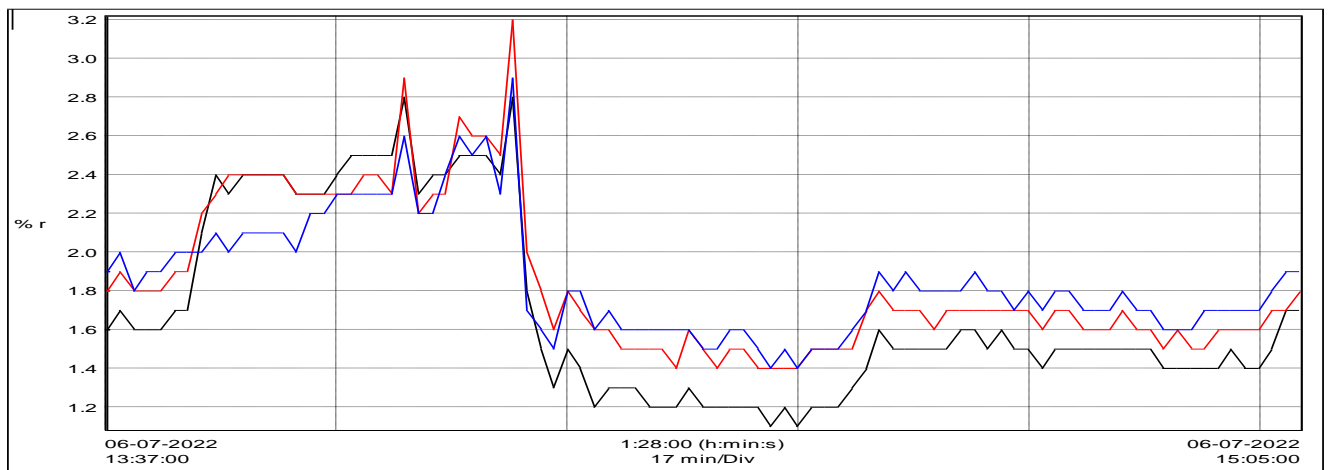
Power (MW)



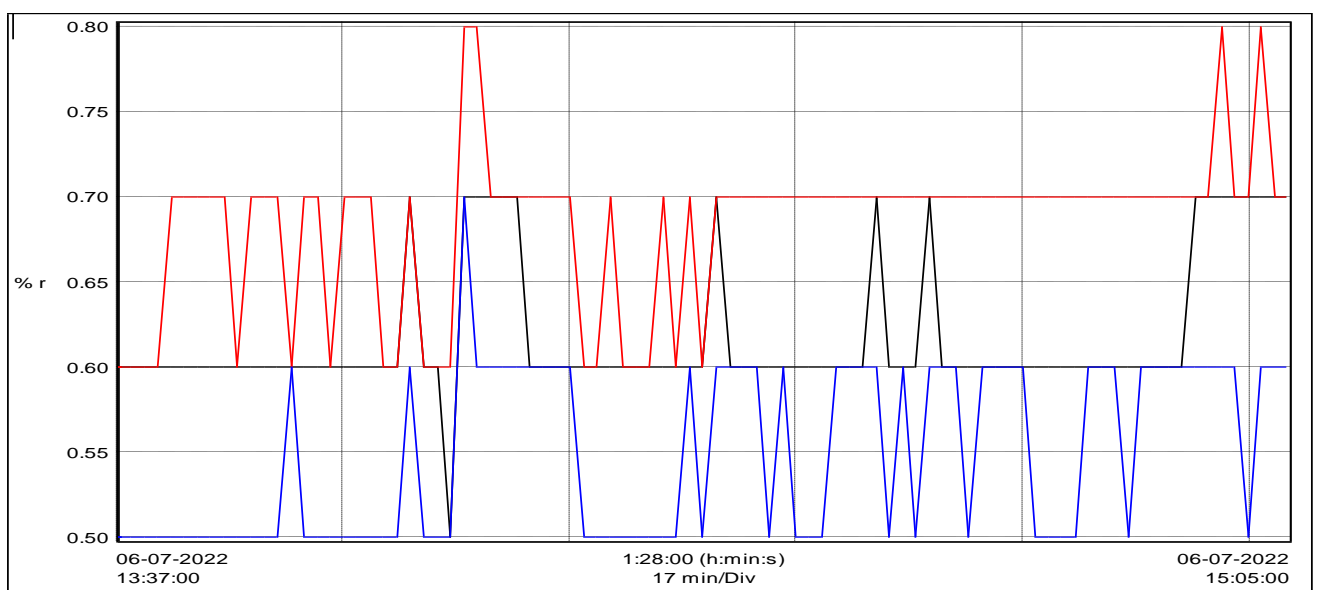
Power factor



THDi



THDv



Observation:

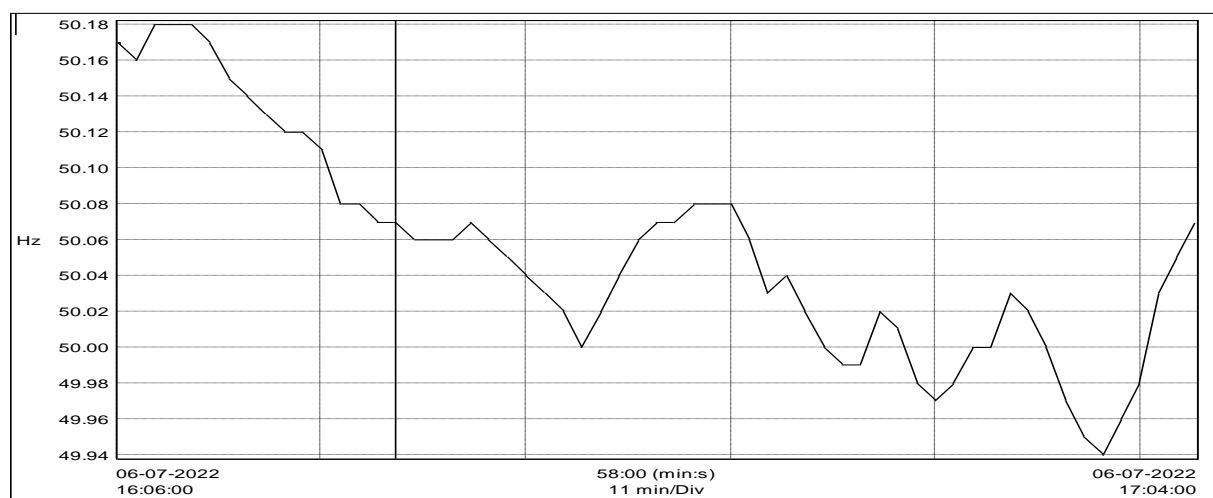
15. During the study of overall load profile, it has been observed that the maximum running load of the feeder is 10.95 MW. The average power factor during the time of study has been recorded as 0.984 minimum, 0.988 averages and 0.991 maximum.
16. During the study of load profile, it has been observed that the percentage of harmonic in current and voltage are found in the prescribed limit i.e. THDi in the range of 1.1 -2.8 % and in voltage, THDv is in the range of 0.5 -0.7 %. As per IEEE norms the harmonics in the current should be less than 10% and that of in the voltage should be in the range of less than 5%.
17. It has been observed that over all voltage level is in the range of 30.15 KV to 31.13 KV. The average voltage is 30.65 KV which is at lower side although voltage is within Grid norms and also data is collected during the peak summer season.

6. Ecotech-2 Substation, Varun Beverage Outgoing feeder

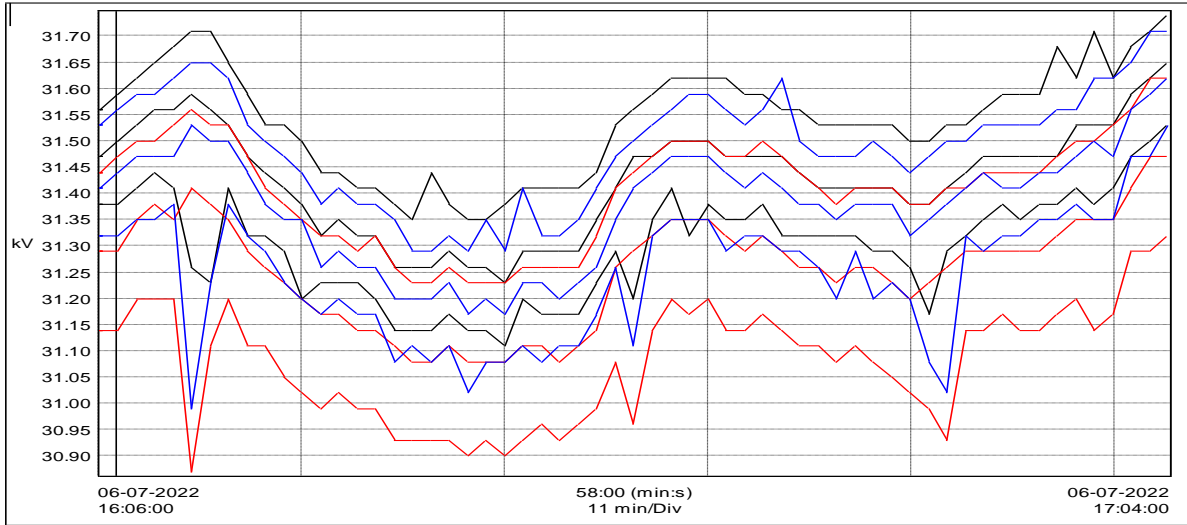
Ecotech-2 Substation Varun Beverage Outgoing Feeder (33 KV)				
Data	Minimum	Maximum	Average	Remarks
Frequency	49.94	50.18	50.05	Satisfactory.
Voltage KV (HT)	31.16	31.58	31.3	
% THDv	0.3	0.6	0.5	
Amps. (HT)	75.09	87.68	81.18	
% THDi	5.03	7.2	6.04	
Load (MW)	4.05	4.65	4.35	
Power Factor	0.982	0.989	0.986	
% Voltage unbalanced	0.3	0.4	0.35	
% Current unbalanced	1.5	2.3	1.87	

Trend of waveform of recording at Ecotech-2 Substation, Varun Beverage outgoing Feeder

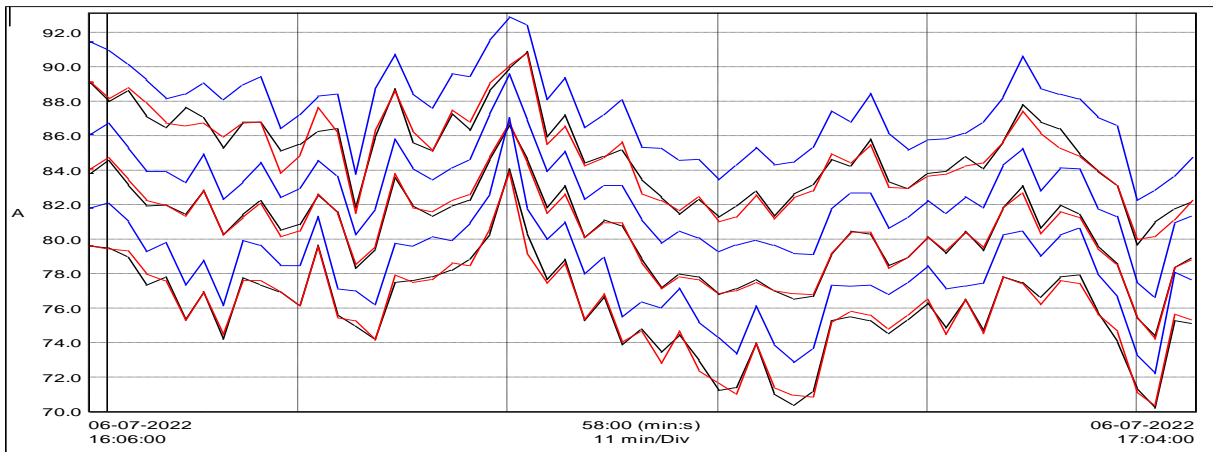
Frequency



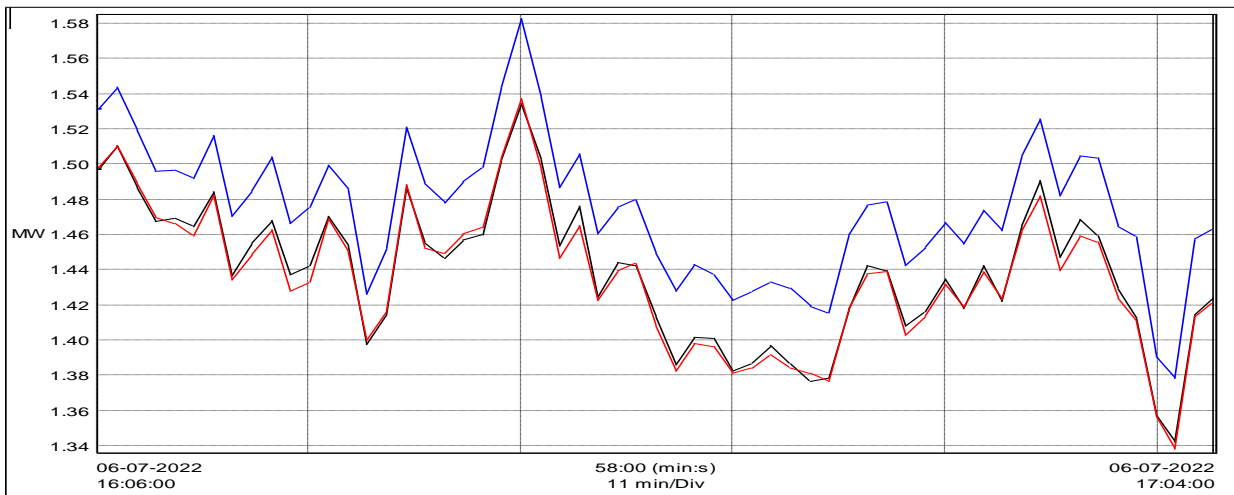
Voltage



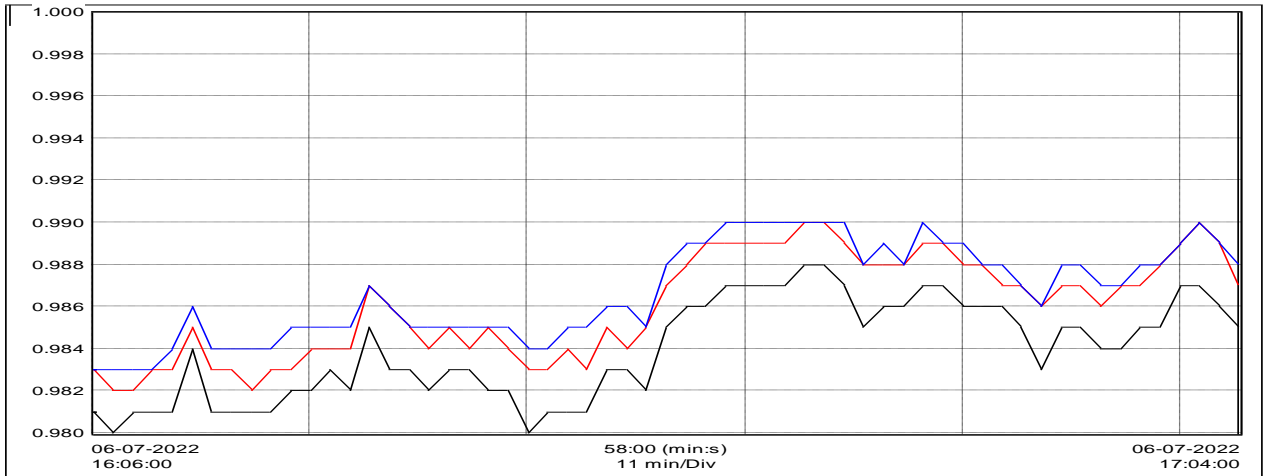
Current



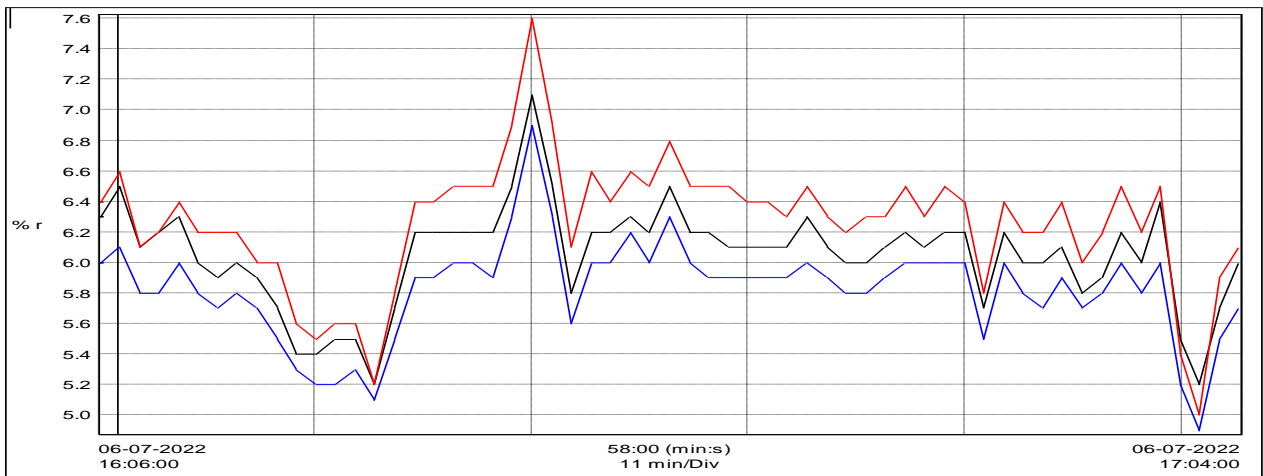
Power (MW)



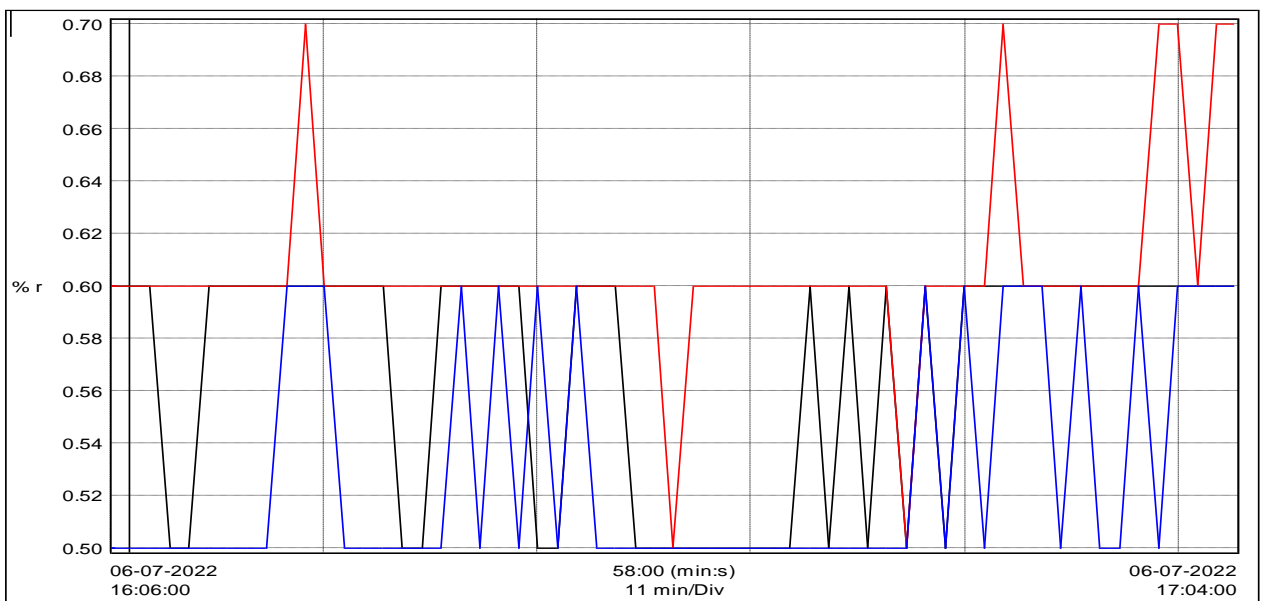
Power Factor



THDi



THDv



Observation:



18. During the study of overall load profile, it has been observed that the maximum running load of the feeder is 4.65 MW. The average power factor during the time of study has been recorded as 0.982 minimum, 0.989 averages and 0.986 maximum.
19. During the study of load profile, it has been observed that the percentage of harmonic in current and voltage are found in the prescribed limit i.e. THDi in the range of 5.03 -7.2 % and in voltage, THDv is in the range of 0.3 -0.6 %. As per IEEE norms the harmonics in the current should be less than 10% and that of in the voltage should be in the range of less than 5%.
20. It has been observed that over all voltage level is in the range of 31.16 KV to 31.58 KV. The average voltage is 31.3 KV which is at lower side, although voltage is within Grid norms and also data is collected during the peak summer season.

Annexures

Annexure- I Introduction of Verification Team

Company/ Institution/ Organization	Team Member	Designation	Role
MITCON Consultancy & Engineering Services Ltd.	Mr. Jignesh Patel	Accredited Energy Auditor (AEA-0104)	Project Head, Review of data and report
	Mr. Sadan Kumar Sinha	Sector Expert, DISCOM	Field Visit Inspection, Review of data and report
	Mr. Anjum Mushtaque	Energy Auditor	Field Visit Inspection, Data Management and report Review
	Mr. Ankit Srivastava	Project In charge	Field Visit Inspection, Data Management and report writing
	Mr. Rahul Kumar	Certified Energy Auditor	Field Visit Inspection, Document Verification and Report writing
	Mr. Ajay Maurya	Certified Energy Auditor	Field Visit Inspection, Document Verification and Report writing

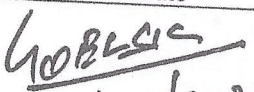

Annexure- II Minutes of Meeting with the NPCL team

MINUTES OF MEETING		
 Noida Power Company Limited	Noida Power Company Limited (NPCL) Electric Substation, Knowledge Park-IV, Gautam Buddha Nagar Greater Noida, Uttar Pradesh - 201310	Date: 7 th July 2022
 Solutions for Sustainable Tomorrow	MITCON Consultancy and Engineering Services Ltd., New Delhi	Revision : NA

Topic					
Annual Energy Audit of NPCL for FY 2021-22					
Meeting Details					
Date	7 th July 2022	Time	11 am	Venue	Noida Power Company Limited (NPCL) Electric Substation, Knowledge Park-IV, Gautam Buddha Nagar Greater Noida, Uttar Pradesh - 201310
Noida Power Company Limited (NPCL)		1. Mr. Sanjiv Goel 2. Mr. Vijay P Singh 3. Mr. Krishna Chandra			
Consultant Team		1. Mr. Rahul Kumar 2. Mr. Ankit Srivastava 3. Mr. Anjum Mushtaque		4. Mr. S K Sinha 5. Mr. Jignesh Patel	

Meeting involved detailed discussion on the infrastructure details of NPCL and scope of work including activities to be undertaken for the completion of Annual Energy Audit of NPCL for FY 2021-22. Following points were discussed/reviewed/performed:

1. Data provided by NPCL in the Annual Energy Accounting Form
2. The Consultant verified the purchase energy, billed energy, transmission loss, billed amount, collected amount, AT&C loss
3. The Consultant verified the category wise number of consumers, connected load, billed energy
4. The Consultant verified the infrastructure details such as number of grid substation, number of power substations and DT substations, number of voltage wise feeders etc.
5. Sample field measurements at incoming feeders (33kV level) for sending and receiving side for assessment of meters, energy and losses
6. Sample field measurements for substation transformation loss
7. Sample field measurements for physical meter verification
8. NPCL is not maintaining feeder wise losses for all the feeders however they are maintaining voltage level wise losses. It is recommended to start maintaining feeder wise losses for all the feeders for comprehensive reporting.
9. All data which is being maintained by the NPCL has been collected as per the Annual Energy Accounting Form and sample measurements have been completed.

Signed on behalf Noida Power Company Limited (NPCL)		Signed on behalf of MITCON Consultancy & Engineering Services Limited	
Name	Signature & Date	Name	Signature & Date
SANJIV K. GOEL	 08/07/2022	Rahul Kumar	 Rahul Kumar Energy Auditor EA-30703

Annexure- III Check List prepared by auditing Firm

Parameter	Primary Documents from where the information can be sourced and to be kept ready for verification by Accredited Energy Auditor (Annual for FY 2021-22)	Data Provided by NPCL
Details of purchased energy	Power purchase bills, SLDC documents, energy accounts, Audit statement, petition	Utility Bills from NPCL
Transmission loss %	Calculation of transmission loss viz difference in total energy purchased and total energy drawl at distribution periphery.	Internal data Base & Calculation Sheet
Transmission loss in (MU) Energy sold outside the periphery, Open access sale, EHT Sale	Energy accounting statements	Statement and as per formula mentioned in the BEE format
Net input energy (received at DISCOM periphery, after adjustment) in MU	GIS Database	As per Internal data base and PP invoice
Energy input details meter wise, with other mentioned details	SLDC document, meter log	As per Internal data base and PP invoice
Summary of Circle wise Loss Number of metered consumers and connected load, category wise of each circle Number of un-metered consumers and connected load, category wise of each circle	Statements, Database	SAP ERP Data Base
Circle wise input Energy for billed meter energy and billed un-metered energy	Meter logs through which input energy of circle was computed. Un-metered energy with reference of calculation should be maintained	SAP ERP Data Base

Annexure- IV Brief Approach, Scope & Methodology for audit

Annual Energy Audit shall have verification of:

- a) Existing pattern of energy distribution across periphery of the company;
- b) Accounted energy flow submitted by the company at all applicable voltage levels of the distribution network, –
 - (i) Energy flow between transmission and 220kV/66kV/ 33kV/11kV incoming distribution feeders
 - (ii) Energy flow between 66kV/33kV outgoing and 11kV/6.6kV incoming feeders
 - (iii) Energy flow between 11 kV/6.6kV feeders and distribution transformers, or high voltage distribution system
 - (iv) Energy flow between Feeder to end-consumer
 - (v) Energy flow between 220/33/11 kV/0.44 kV directly to consumer

Auditor, in consultation with the nodal officer of the company shall:

- (i) The energy audit shall be conducted strictly as per BEE guidelines for DISCOM audit.
- (ii) Agree on best practice procedures on accounting of energy distributed across the network
- (iii) Collect data on energy received, and distributed, covered within the scope of energy audit.

Auditor shall:

- (i) Verify the accuracy of the data collected in consultation with the nodal officer of the company as per standard practice to assess the validity of the data collected;
- (ii) Analyze and process the data with respect to–
- (iii) Consistency of data monitoring compared to the collected data;
- (iv) Recommendations to facilitate energy accounting and improve energy efficiency;
- (v) With respect to the purpose of energy accounting in reducing losses for the company.

Prioritization and preparation of action plan:

- Report shall include following activities, namely: –
- Data collection and verification of energy distribution:
- Monthly energy consumption data of consumers and system metering from the company at following voltage levels –
- 11/33/66/220 kV level feeders of Sub-stations;
- 6.6 kV level feeders of Distribution Sub-stations;
- 440 V level, including Distribution Transformer and low-tension consumer;
- Input energy details for all metered input points;
- Boundary meter details;
- Source of energy supply (e.g. electricity from grid or self-generation), including generation from renewables.
- Review of the current consumption practices in order to identify the energy loss in the system;
- Data verification, validation and correction:
- 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;
- Verification and correction of input energy, taking into account the following –
- Recorded system meter reading by metering agency;
- All the input points of transmission system;
- Details provided by the transmission unit;
- Relevant records at each electricity test division for each month;
- Recorded meter reading at all export points (where energy sent outside the State is from the Distribution system); and
- System loading and corresponding infrastructure;
- Energy supplied to Open Access Consumers which is directly purchased by Open Access consumers from any supplier other than electricity distribution company; and
- Verify and validate the system metering data provided by metering agency through random field visit (particularly for data irregularity).

METHODOLOGY

- Auditor shall depute a team of experts for conducting the evaluation / audit and shall work in close association with DISCOM.
- Auditor shall submit an execution work plan for the assignment for which relevant data support will be provided by DISCOM.
- Auditor will arrange meeting and provide presentation on overview, roadmap, scenario and results of the assignment to various plant heads / operational staff / engineering staff.

Annexure- V Power Purchase Detail (Sample Power Purchase bills)

NPCL is purchasing power at 33KV level. NPCL purchase power from both conventional coal generation power station as well as from renewable generating sources including hydropower, wind generating stations.

Some power is also purchased through the energy exchange, UI & Banking.

NPCL also has In-house generation of solar power through Net-Metered consumers (at 33KV/11KV/LT level), Solar Power Projects of GNIDA (at 11 KV level) and APPCPL (at LT level).

Ref No: DIL/GM-Coord/NPCL/1915

Date: 05-03-2022

To,

Manager(Projects& Power Procurement)
Noida Power Company Limited,
Electric Sub-Station,
Knowledge Park-IV,
Greater Noida, Goutam Budh Nagar
Uttar Pradesh - 201310

Sub: Submission of Monthly invoice for the month of February-2022 for sale of power from Dhariwal Infrastructure Limited (DIL) to NPCL

Ref: 1. UPERC approved Power Purchase Agreement dated 20-04-2016 between DIL and NPCL

2. MYT order dated 05-02-2019 issued by UPERC for DIL

Dear Sir,

Consequent upon declaration of the DIL MYT Order dated 05-02-2019, please find enclosed our monthly invoice for the month of February'22. Summary of the monthly bill furnished below:

Settlement Period	Invoice	Invoice No.	Amount (Rs.)
February -2022	Capacity Charges	NPCL/MI/21-22/12	19,72,56,950
	Energy Charges		38,78,03,988
Total payable Amount for the settlement period (Rs.)			58,50,60,938

Rupees Fifty Eight Crore Fifty Lakhs Sixty Thousand Nine Hundred and Thirty Eight Only.

We request you to kindly release the payment at the earliest.

Thanking You,

Yours Sincerely

For Dhariwal Infrastructure Limited


Authorized Signatory

Encl: 1. Monthly Invoice for the month of February-2022

Monthly Invoice for February-2022

Noida Power Company Limited
Plot No. ESS, Sector Knowledge Park – IV,
Greater Noida- 201 310
Uttar Pradesh

Invoice No: NPCL/MI/21-22/12
Ref. No: DIL/PS/Mar/2021-22/736
Settlement period: 01-02-2022 to 28-02-2022
Bill Date: March 5, 2022
Due Date: April 4, 2022

GST No: 09AAACN4984D1ZC

Description: Monthly Bill for Power supply as per PPA article 11.2.2 between DIL and NPCL dated 26-09-2014 and DIL Multi Year Tariff Order passed by Hon'ble Uttar Pradesh Electricity Regulatory Commission dated 05.02.2019 (HSN - 27160000)

S.N.	Particular	UOM	Value	Reference
A	Monthly Capacity Charges Payment			
A-1	Cumulative Plant Availability Factor (PAF11)	%	86.36%	Annexure-1
A-2	Normative Plant Availability Factor (NAPAF)	%	85.00%	UPERC Tariff Regulation 2014
A-3	Annual Fixed Cost Specified for Year (AFC)	₹	2,36,70,83,400	Note 1
A-4	Capacity Charges Payable for FEB'22 (CC11)	₹	19,72,56,950	CC11 = ((AFC*11/12) (PAF11/NAPAF) subject to ceiling of (AFC x 11/12)) - (CC1+CC2 +CC3 +CC4+CC5+CC6+CC7+CC8+CC9+CC10)
A-5	Cumulative Capacity Charges raised till Jan'22	₹	1,97,25,69,500	
A-5	Capacity Charges payable for the month of Feb'22	₹	19,72,56,950	
B	Monthly Energy Charges Payment			
B-1	Scheduled Energy for the month	kWh	113792250	Annexure-1
B-2	Energy Charges Rate	₹/kWh	3.408	Note 2
B-3	Monthly Energy Charges	₹	38,78,03,988	
C	Total Charges (A+B)	₹	58,50,60,938	

Billing Summary

Total Capacity charge payment for the Settlement Period (₹)	19,72,56,950
Total Energy charges for the settlement Period (₹)	38,78,03,988
Total charges payable (₹)	58,50,60,938

Rupees Fifty Eight Crore Fifty Lakhs Sixty Thousand Nine Hundred and Thirty Eight Only.

Designated Account Details

Account Name	Dhariwal Infrastructure Limited		
Account No	000605027585		
Bank Address	ICICI BANK LTD 22, R.N.MUKHERJEE ROAD, KOLKATA -700001		
IFSC Code	ICIC0000006	PAN No:	AACCD4743L
MICR Code	700229002	SWIFT Code:	ICICINBB006
GST No/UNIQUE ID:	27AACCD4743L1ZG		

Note 1: Annual Fixed Cost computed @ ₹ 1.87 per unit for 170 MW @ 85% Normative PAF.

Note 2: Energy Charges Rate considered as per DIL MYT Order dated 05.02.2019 and UPERC Generation Tariff Regulations 2014.

Note 3: Late Payment Surcharge shall be payable @1.25% per month if paid beyond due date.

For Dhariwal Infrastructure Limited



Authorized Signatory

Encl:

- Annexure-1: Declared Capacity & Implemented Schedule for the month of Feb-2022
Annexure 2: Calculation of Escalable Energy Charges
Annexure 3: Calculation of Energy Charges with corrected GCV
Annexure 4: CA Certificate for GCV (ARB) for the month of Jan-22
Annexure 5: LDO GCV Certificate from third party for the month of Jan-22
Annexure 6: WRPC REA Details for the Month of Feb-2022

Annexure-1

Daily Declared Capacity & Implemented Schedule for the Month of FEBRUARY-2022

Date	Contracted Capacity (kWh)	Declared Availability (kWh)	Actual Availability (kWh)	Cumulative Declared Availability (kWh)	Implemented Schedule at DIL Ex-bus (kWh)
FY 2017-18	1489200000	1324843500	1323516463	1324843500	1176257331
FY 2018-19	1489200000	1286691773	1286691773	1286691773	1175369688
FY 2019-20	1493280000	1371826750	1371826750	1371826750	1130963410
FY 2020-21	1489200000	1450528250	1450528250	1450528250	1300685500
Apr-21	122400000	116880250	116880250	116880250	110405750
May-21	126480000	117296175	117296175	234176425	104812500
Jun-21	122400000	121989500	121989500	356165925	114836000
Jul-21	126480000	113960250	113960250	470126175	106817250
Aug-21	126480000	119030000	119030000	589156175	113584000
Sep-21	122400000	122044500	122044500	711200675	111903625
Oct-21	126480000	36879750	36879750	748080425	36400500
Nov-21	122400000	65497500	65497500	813577925	65264250
Dec-21	126480000	126480000	126480000	940057925	126290250
Jan-22	126480000	122546250	122546250	1062604175	121885750
01-02-2022	4080000	4080000	4080000	1066684175	4080000
02-02-2022	4080000	4080000	4080000	1070764175	4080000
03-02-2022	4080000	4080000	4080000	1074844175	4080000
04-02-2022	4080000	4080000	4080000	1078924175	4080000
05-02-2022	4080000	4080000	4080000	1083004175	4048000
06-02-2022	4080000	4080000	4080000	1087084175	4080000
07-02-2022	4080000	4051500	4051500	1091135675	4051500
08-02-2022	4080000	4080000	4080000	1095215675	4080000
09-02-2022	4080000	4080000	4080000	1099295675	4080000
10-02-2022	4080000	4080000	4080000	1103375675	3772000
11-02-2022	4080000	4080000	4080000	1107455675	4080000
12-02-2022	4080000	4080000	4080000	1111535675	4080000
13-02-2022	4080000	4080000	4080000	1115615675	4080000
14-02-2022	4080000	4080000	4080000	1119695675	4080000
15-02-2022	4080000	4080000	4080000	1123775675	4078250
16-02-2022	4080000	4080000	4080000	1127855675	4080000
17-02-2022	4080000	4080000	4080000	1131935675	4080000
18-02-2022	4080000	4080000	4080000	1136015675	4080000
19-02-2022	4080000	4080000	4080000	1140095675	4080000
20-02-2022	4080000	4080000	4080000	1144175675	4047000
21-02-2022	4080000	4080000	4080000	1148255675	4080000
22-02-2022	4080000	4080000	4080000	1152335675	4080000
23-02-2022	4080000	4080000	4080000	1156415675	4080000
24-02-2022	4080000	4080000	4080000	1160495675	4080000
25-02-2022	4080000	4080000	4080000	1164575675	4075000
26-02-2022	4080000	4080000	4080000	1168655675	4080000
27-02-2022	4080000	4080000	4080000	1172735675	4047250
28-02-2022	4080000	4080000	4080000	1176815675	4073250
Total kWh	114240000	114211500	114211500		113792250

Annexure-2

Month	Energy Charge Rate as per the direction of Hon'ble UPERC vide its Order dated 20.04.2016 read with the Orders dated 15.01.2016 and 05.02.2019							LDO	Total Energy Charge
	Coal Charges			Inland Trans.Charges-700 KM					
	Escalable Charge			Escalable Charge					
	N	Escalation Index	Escalated Energy Charge	N	Escalation Index	Escalated Energy Charge			
2015-16		6.62%	0.7658		6.33%	0.7761	5.85%		
26-10-2015		100			100				
31-10-2015	0.16	100.0890	0.766	0.36	100.0851	0.776	0.039	1.581	
30-11-2015	2	101.1033	0.766	2	101.0550	0.777	0.039	1.582	
31-12-2015	3	101.6550	0.774	3	101.5825	0.784	0.039	1.598	
31-01-2016	4	102.2067	0.778	4	102.1100	0.788	0.039	1.606	
29-02-2016	5	102.7583	0.783	5	102.6375	0.793	0.039	1.615	
31-03-2016	6	103.3100	0.787	6	103.1650	0.797	0.040	1.623	
2016-17		6.62%			6.13%		5.85%		
30-04-2016	1	103.8799	0.791	1	103.6920	0.801	0.040	1.632	
31-05-2016	2	104.4499	0.796	2	104.2190	0.805	0.040	1.640	
30-06-2016	3	105.0198	0.800	3	104.7460	0.809	0.040	1.649	
31-07-2016	4	105.5897	0.804	4	105.2730	0.813	0.040	1.658	
31-08-2016	5	106.1596	0.809	5	105.8000	0.817	0.041	1.666	
30-09-2016	6	106.7296	0.813	6	106.3270	0.821	0.041	1.675	
		6.62%			2.18%		5.85%		
31-10-2016	1	107.3184	0.817	1	106.5202	0.825	0.041	1.684	
30-11-2016	2	107.9072	0.822	2	106.7133	0.827	0.041	1.690	
31-12-2016	3	108.4960	0.826	3	106.9065	0.828	0.041	1.696	
31-01-2017	4	109.0848	0.831	4	107.0996	0.830	0.042	1.702	
28-02-2017	5	109.6736	0.835	5	107.2928	0.831	0.042	1.708	
31-03-2017	6	110.2623	0.840	6	107.4860	0.833	0.042	1.715	
2017-18		13.78%			2.18%		5.85%		
30-04-2017	1	111.5285	0.844	1	107.6813	0.834	0.042	1.721	
31-05-2017	2	112.7947	0.854	2	107.8765	0.836	0.042	1.732	
30-06-2017	3	114.0608	0.864	3	108.0718	0.837	0.043	1.744	
31-07-2017	4	115.3270	0.873	4	108.2671	0.839	0.043	1.755	
31-08-2017	5	116.5932	0.883	5	108.4623	0.840	0.043	1.767	
30-09-2017	6	117.8594	0.891	6	108.6576	0.842	0.043	1.778	
		6.62%			2.18%		5.85%		
31-10-2017	1	118.5096	0.903	1	108.8550	0.843	0.044	1.789	
30-11-2017	2	119.1598	0.908	2	109.0524	0.845	0.044	1.796	
31-12-2017	3	119.8100	0.913	3	109.2498	0.846	0.044	1.803	
31-01-2018	4	120.4602	0.917	4	109.4472	0.848	0.044	1.810	
28-02-2018	5	121.1104	0.922	5	109.6446	0.849	0.044	1.816	
31-03-2018	6	121.7605	0.927	6	109.8420	0.851	0.045	1.823	
2018-19		6.62%			12.47%		5.85%		
30-04-2018	1	122.4322	0.932	1	110.9834	0.853	0.045	1.830	
31-05-2018	2	123.1039	0.938	2	112.1249	0.861	0.045	1.844	
30-06-2018	3	123.7756	0.943	3	113.2663	0.870	0.045	1.858	
31-07-2018	4	124.4473	0.948	4	114.4078	0.879	0.045	1.872	
31-08-2018	5	125.1191	0.953	5	115.5492	0.888	0.046	1.887	
30-09-2018	6	125.7908	0.958	6	116.6906	0.897	0.046	1.901	
		21.66%			39.54%		5.85%		
31-10-2018	1	128.0613	0.963	1	120.5356	0.906	0.046	1.915	
30-11-2018	2	130.3318	0.981	2	124.3805	0.936	0.046	1.963	
31-12-2018	3	132.6024	0.998	3	128.2255	0.965	0.047	2.010	
31-01-2019	4	134.8729	1.015	4	132.0704	0.995	0.047	2.057	
28-02-2019	5	137.1434	1.033	5	135.9154	1.025	0.047	2.105	
31-03-2019	6	139.4139	1.050	6	139.7603	1.055	0.047	2.152	
2019-20		6.62%			8.53%		5.85%		
30-04-2019	1	140.1830	1.068	1	140.7538	1.085	0.048	2.200	
31-05-2019	2	140.9521	1.074	2	141.7472	1.092	0.048	2.214	
30-06-2019	3	141.7212	1.079	3	142.7407	1.100	0.048	2.228	
31-07-2019	4	142.4903	1.085	4	143.7342	1.108	0.048	2.241	
31-08-2019	5	143.2594	1.091	5	144.7276	1.116	0.048	2.255	
30-09-2019	6	144.0285	1.097	6	145.7211	1.123	0.049	2.269	
2019-20		6.62%			11.33%		5.85%		
31-10-2019	1	144.8231	1.103	1	147.0970	1.131	0.049	2.283	
30-11-2019	2	145.6176	1.109	2	148.4728	1.142	0.049	2.300	
31-12-2019	3	146.4122	1.115	3	149.8487	1.152	0.049	2.317	
31-01-2020	4	147.2067	1.121	4	151.2245	1.163	0.050	2.334	
29-02-2020	5	148.0013	1.127	5	152.6004	1.174	0.050	2.351	
31-03-2020	6	148.7958	1.133	6	153.9762	1.184	0.050	2.368	
2020-21		6.62%			2.18%		5.85%		
30-04-2020	1	149.6167	1.139	1	154.2559	1.195	0.050	2.385	
31-05-2020	2	150.4375	1.146	2	154.5356	1.197	0.051	2.394	
30-06-2020	3	151.2584	1.152	3	154.8154	1.199	0.051	2.402	
31-07-2020	4	152.0792	1.158	4	155.0951	1.202	0.051	2.411	
31-08-2020	5	152.9001	1.165	5	155.3748	1.204	0.051	2.420	
30-09-2020	6	153.7209	1.171	6	155.6545	1.206	0.052	2.428	
2020-21		6.62%			2.18%		5.85%		
31-10-2020	1	154.5689	1.177	1	155.9373	1.208	0.052	2.437	
30-11-2020	2	155.4170	1.184	2	156.2200	1.210	0.052	2.446	
31-12-2020	3	156.2650	1.190	3	156.5028	1.212	0.052	2.455	
31-01-2021	4	157.1130	1.197	4	156.7856	1.215	0.053	2.464	
28-02-2021	5	157.9610	1.203	5	157.0684	1.217	0.053	2.473	
31-03-2021	6	158.8091	1.210	6	157.3511	1.219	0.053	2.482	
2021-22		6.62%			2.18%		5.85%		
30-04-2021	1	159.6852	1.216	1	157.6370	1.221	0.053	2.491	
31-05-2021	2	160.5613	1.223	2	157.9228	1.223	0.054	2.500	
30-06-2021	3	161.4374	1.230	3	158.2087	1.226	0.054	2.509	
31-07-2021	4	162.3135	1.236	4	158.4945	1.228	0.054	2.518	
31-08-2021	5	163.1896	1.243	5	158.7804	1.230	0.054	2.528	
30-09-2021	6	164.0657	1.250	6	159.0662	1.232	0.055	2.537	
2021-22		6.62%			2.18%		5.85%		
31-10-2021	1	164.9708	1.256	1	159.3552	1.235	0.055	2.546	
30-11-2021	2	165.8759	1.263	2	159.6441	1.237	0.055	2.555	
31-12-2021	3	166.7810	1.270	3	159.9331	1.239	0.056	2.565	
31-01-2022	4	167.6861	1.277	4	160.2221	1.241	0.056	2.574	
28-02-2022	5	168.5912	1.284	5	160.5111	1.244	0.056	2.584	

Annexure-3**Energy Charge Rate for the month of February 2022**

Sl. No.	Particulars	UoM	Feb-22
1	Scheduled Generation for NPCL	kWh	113792250
2	Normative Auxiliary Power Consumption	%	9.00%
3	Gross Generation for NPCL	kWh	125046429
4	Normative Gross Station Heat Rate	(kCal/kWh)	2327
5	GCV of LDO	(kCal/L)	9138
6	Normative Specific LDO Consumption	(ml/kWh)	0.75
7	Total Heat Contribution by LDO	GCal	857
8	Total Heat required for Scheduled Generation	GCal	290983
9	Total Heat Contribution by Coal	GCal	290126
10	Opening Stock of FSA Grade Coal	MT	0.00
11	FSA Grade Coal received for NPCL for the current month considering 0.8% Normative Transit Loss (Provisional)	MT	70849.03
12	Monthly Wt. Avg. GCV (ARB) of FSA Grade Coal during the previous month	(kCal/kg)	3130
13	Wt. Avg. GCV (ARB) of FSA Grade Coal (considering opening stock) for the current month	(kCal/kg)	3130
14	Heat contributed by FSA Grade Coal for NPCL	(GCal)	221747
15	Consumption of FSA Grade Coal	MT	70849.03
16	Closing Stock of FSA Grade Coal	MT	0.00
17	Escalated Coal Charge Rate as per the direction of Hon'ble UPERC vide its Order dated 20.04.2016 read with the Orders dated 15.01.2016 and 05.02.2019	(₹/Unit)	1.284
18	Escalated Freight Charge Rate escalated as per the direction of Hon'ble UPERC vide its Order dated 20.04.2016 read with the Orders dated 15.01.2016 and 05.02.2019	(₹/Unit)	1.244
19	Total Coal Charges	(₹/Unit)	2.528
20	Total Coal Cost at actual Weighted Average GCV	(₹/Unit)	3.352
21	LDO Charges	(₹/Unit)	0.056
22	Total Energy Charge Rate	(₹/Unit)	3.408

TO WHOMSOEVER IT MAY CONCERN

On the basis of documents, information and explanations provided by M/s Dhariwal Infrastructure Limited (hereinafter referred to as 'the Company'), having its Registered Office at CESC House, Chowringhee Square, Kolkata – 700 001, FSA Grade (G10, G11 & G12) Coal received by the Company directly by rail mode for its thermal power plant (Unit 2) located at Chandrapur, Maharashtra, along with coal allocated for supply of power to Noida Power Company Limited (NPCL) and corresponding As Received Weighted Average Gross Calorific Value (GCV) during the month of January'2021 is appended below:-

Month	Quantity	Coal allocated for supply to NPCL @62.963%	Weighted Average GCV (As Received Basis)
	(Tonne)	(Tonne)	(kCal/kg)
Jan-22	95336.71	60026.85	3130

Notes:

1. As per Fuel Supply Agreement dated 8 March, 2016 read with Addendum # 1 dated 30 June, 2016 and Addendum # 3 dated 13 October, 2020, Annual Contracted Quantity (ACQ) of 9,89,400 Tonne has been allocated for supply to NPCL, representing 62.963% of the total ACQ of 15,71,409 Tonne sanctioned for Unit 2.
2. Gross Calorific Value (GCV) as mentioned above is measured by an independent agency at unloading end inside the power plant.

For S.S.D. & Associates
Chartered Accountants
FRN No : 322045E



S. Sahu

S. Sahu
Proprietor
Membership No. 300-52774
UDIN – 22052774AEDKKI5834

Dated: 04.03.2022
C/17, New Garia Housing
Co-operative Society
Kolkata – 700 094

Mitra S. K. Private Limited



Unit No. 212, Srishti Plaza
Saki Vihar Road, Powai Andheri East
Mumbai - 400 072
[CIN : U51909WB1956PTC023037]

T : 91 22 4015 0416
F : 91 22 4015 4015
E : mumbai@mitrask.co.in

Ref. No: ED/OIL/MUM-2021/00011
Certificate No: MSK/MUM-2021/195

Date : 17.02.2022

CERTIFICATE OF SAMPLING AND ANALYSIS

SAMPLING:

Systematic sampling was performed in accordance with API chapter 17 standards.

Manual Sampling carried out from three layers Upper, Middle and Lower (UML) of cargo thus mixed well into a final composite Sample.

Commodity: Light Diesel Oil (LDO)

Sampling commenced: 24.01.2022

Sampling Completed: 24.01.2022

ANALYSIS REPORT

Samples were analyzed in our own M/S Mitra S K Pvt Ltd Laboratory Udayan Lab the results as obtained are mentioned below

SR NO	PARAMETER	TEST METHOD	UNIT	RESULT
1.	Water Content	ASTM D 95 -13	%	<0.1
2.	Density @ 40 ° C	ASTM D 1298-12b	gm/cc	0.850
3.	Gross Calorific Value	ASTM D 5865	KCal/Kg	10751

For, Mitra S. K. Private Limited



S
Authorized Signatory

ANNEXURE -6



भारत सरकार
Government of India
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
पश्चिम क्षेत्रीय विद्युत समिति



Western Regional Power Committee

आई एम ओ : 9001-2015

एफ -3, एमआयडीसी क्षेत्र, अंधेरी (पूर्व), मुंबई - 400 093

F-3, MIDC Area, Andheri (East), Mumbai - 400 093

ISO: 9001-2015

दूरभाष Phone: 022- 28221681; 28250004; 28200195; फैक्स Fax : 022 – 28370193

Website : www.wrpc.gov.in

E-mail: comml-wrpc@nic.in

सं.पक्षेविस/वाणिज्य-1/एबीटीआरईए/2022/2.0/

दिनांक: 02.03.2022

No:WRPC/Comml.-I/ABTREA/2022/2.0/02508

सेवा में /To,

(सूची के अनुसार /As per list)

विषय:- फ़रवरी 2022 माह के लिए एबीटी आधारित प्रोविज़नल आरईए ।

Sub:- Provisional REA based on ABT for the month of **February 2022**.

महोदय / Sir ,

इस पत्र के साथ पक्षेभाप्रेकेन्द्र , मुंबई द्वा रा प्रस्तुत डाटा के अनुसार फ़रवरी 2022 माह के लिए तैयार किया गया प्रोविज़नल क्षेत्रीय ऊर्जा लेखा (आरईए) तथा यू.आर.एस. ऊर्जाविवरण (.xls फ़ाइलें) संलग्न है ।

सभी संबंधित घटकों से अनुरोध है कि इस विषय में यदि कोई विवाद / त्रुटि हो तो यह आरईए जारी होने की तिथि से 15 दिन के अंदर आवश्यक कार्रवाई हेतु इस कार्यालय को सूचित करें ।

उपरोक्त क्षेत्रीय ऊर्जा लेखा की सॉफ्ट कापी <http://www.wrpc.gov.in> पर उपलब्ध है ।

Please find enclosed herewith the provisional Regional Energy Account and details of Unrequisitioned power (in .xls files) for the month of **February 2022** prepared as per data furnished by WRLDC, Mumbai. REA is prepared as per the provisions of regulations 42 of the CERC (Terms and Conditions of Tariff) Regulations, 2019 w.e.f 01st April 2020.

All concerned entities are requested to intimate any discrepancy / error within 15 days from the date of issue of this REA for necessary action at our end.

Softcopy of the above Regional Energy Account is available on WRPC website (<http://www.wrpc.gov.in>).

भवदीय/Yours faithfully,

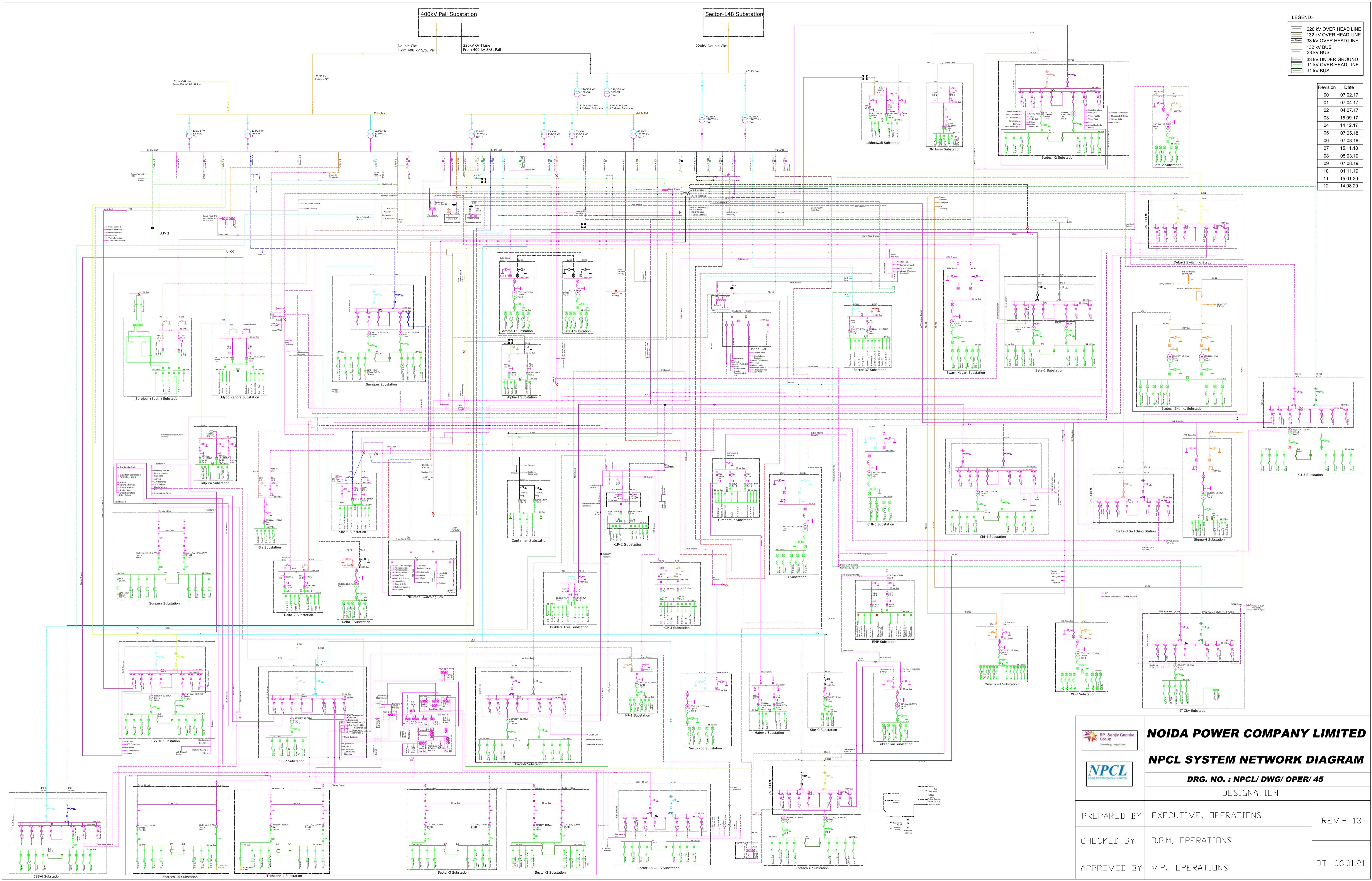
संलग्न Encl:: उपरोक्तानुसार/As Above

(P.D.Lone)

Superintending Engineer (C)

GRICHERAN-HT407	PUNJAB	NPCL/UPI	CHANDIGARH	BYPL	UPPCL	HARYANA	UPPCL	UPPCL	DMRC	RAJASTHAN
	GWEL_SECI- II_RE	DHARWAL	AIWEK1L	AfAnarWind_SECI/II	RPL_SECI-II_RE	HWISL	OKWPL_RE	AIWEK1L	Acme_RUMS	PTC
	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	GWEL_SECI- II_RE	DHARWAL	AIWEK1L	AfAnarWind_SECI/II	RPL_SECI-II_RE	HWISL	OKWPL_RE	AIWEK1L	Acme_RUMS	DBPL
CODE	PSDNRDI	NCDWNRDW	UCALNRAL	YBASHRAS	LHAANRA4	HGHYNRHY	LHX_NRX	LHALNRAL	OSW_NRW	RPPTNRDH
2/1/2022	-453.0975	-4080	-61.4675	-135.945	-354.8475	-6.3575	-374.6875	-215.5075	-262.075	-6238.5
2/2/2022	-1366.6625	-4080	-308.795	-433.345	-784.3175	-43.3325	-896.09	-1039.13	-270.9175	-7647.75
2/3/2022	-1328.23	-4080	-286.15	-354.6125	-843.9	-25.465	-985.1675	-935.7775	-266.2625	-7354.5
2/4/2022	-746.55	-4080	-220.6625	-323.7175	-486.9075	-17.4575	-485.2075	-755.65	-262.725	-7464
2/5/2022	-551.805	-4048	-149.595	-199.4325	-350.92	-17.8325	-426.2425	-482.12	-237.555	-7464
2/6/2022	-528.9925	-4080	-153.1775	-188.155	-380.9925	-16.3475	-376.4075	-506.85	-253.55	-6146.25
2/7/2022	-577.7075	-4051.5	-119.92	-151.455	-428.6075	-7.475	-557.4175	-413.345	-266.5075	-7350.25
2/8/2022	-869.3775	-4080	-181.0175	-219.5225	-522.205	-24.2625	-573.79	-577.5125	-272.9175	-7228.75
2/9/2022	-1547.49	-4080	-232.93	-237.4425	-564.4575	-14.9625	-894.64	-747.9025	-265.1775	-7464
2/10/2022	-1605.6425	-3772	-351.4525	-359.8775	-1027.5275	-24.61	-1050.9375	-1096.84	-266.7625	-8686.5
2/11/2022	-1224.275	-4080	-399.0825	-409.31	-845.6225	-31.585	-1050.6575	-1252.885	-266.4375	-3744
2/12/2022	-528.08	-4080	-57.365	-126.13	-275.3725	-2.12	-309.0825	-165.43	-249.8575	-6510.25
2/13/2022	-587.0175	-4080	-53.9725	-161.6375	-357.4875	-2.5075	-430.36	-184.62	-243.095	-7464
2/14/2022	-585.43	-4080	-71.65	-168.985	-322.675	-0.4525	-422.8025	-211.0525	-266.7525	-7466
2/15/2022	-664.935	-4078.25	-85.23	-140.62	-208.133	-7.67	-370.1	-288.4575	-273.51	-7464
2/16/2022	-418.035	-4080	-67.2625	-162.8275	-218.1625	-6.5475	-337.7175	-189.76	-286.5775	-7464
2/17/2022	-843.43	-4080	-121.8375	-162.7275	-360.6425	-0.9825	-390.7675	-396.2925	-286.5775	-7464
2/18/2022	-630.6	-4080	-148	-194.7075	-816.2675	-3.805	-854.1025	-389.25	-276.8675	-7464
2/19/2022	-1447.34	-4080	-316.0725	-317.805	-1053.4725	-8.4575	-1238.2625	-871.585	-289.3775	-7464
2/20/2022	-1552.5825	-4047	-286.6825	-358	-953.7875	-10.69	-1037.1325	-624.9575	-255.7825	-7464
2/21/2022	-2063.895	-4080	-490.5275	-693.7225	-1925.945	-48.955	-1309.205	-1622.9625	-286.49	-8607.75
2/22/2022	-1068.7875	-4080	-402.6875	-677.0175	-1056.4025	-50.38	-1516.5725	-1908.165	-285.285	-7464
2/23/2022	-1088.7575	-4080	-154.785	-289.3525	-435.75	-5.85	-573.7575	-531.3725	-286.4875	-7464
2/24/2022	-861.535	-4080	-53.65	-150.0625	-456.1275	-6.3475	-461.415	-141.8775	-285.305	-7464
2/25/2022	-1030.145	-4075	-154.915	-251.825	-459.8375	-6.495	-555.6775	-478.8475	-286.4875	-7464
2/26/2022	-1209.5	-4080	-135.22	-234.1175	-646.2825	-0.67	-676.1025	-411.985	-286.4875	-6739
2/27/2022	-1969.5075	-6047.25	-442.08	-538.585	-1039.6375	-12.77	-1323.0825	-1334.2075	-255.9125	-7464
2/28/2022	-1172.95	-4073.25	-215.6825	-302.775	-845.76	-4.8225	-776.3675	-632.12	-285.4875	-6341
1/0/1900										
1/0/1900										
1/0/1900										
TOTAL	-29340.4675	-113792.25	-6932.26	-7933.2425	-16942.61	-409.82	-19887.1225	-18585.2525	-7578.0675	-197401.5

Annexure- VI Single Line Diagram



LEGEND-

[Blue Line]	220 kV OVER HEAD LINE
[Orange Line]	132 kV OVER HEAD LINE
[Green Line]	33 kV OVER HEAD LINE
[Red Line]	11 kV OVER HEAD LINE
[Green Box]	33 kV BUS
[Red Box]	11 kV BUS

Revision	Date
00	07.02.17
01	07.04.17
02	04.07.17
03	15.09.17
04	14.12.17
05	07.05.18
06	07.08.18
07	15.11.18
08	05.03.19
09	07.08.19
10	01.11.19
11	15.01.20
12	14.08.20

 	NOIDA POWER COMPANY LIMITED NPCL SYSTEM NETWORK DIAGRAM DRG. NO. : NPCL/ DWG/ OPER/ 45 DESIGNATION	
	PREPARED BY EXECUTIVE, OPERATIONS CHECKED BY D.G.M, OPERATIONS APPROVED BY V.P., OPERATIONS	REV:- 13 DT:-06.01.21

Annexure- VII Category Wise Service Details

Consumer category	No of connection (Nos)	Total Connected Load (MW)	Billed Energy (MU)
Residential	106390	510.13	694.48
Agricultural	1061	5.36	14.64
Commercial/Industrial-LT	7669	123.65	153.96
Commercial/Industrial-HT	1123	568.52	1366.73
Others	1510	42.57	108.23
Total	117753	1250.23	2338.04

Annexure- VIII List of Parameters arrived through calculation or formulae with list of documents as source of data

S.No.	Data	Unit	Sources of data
1	Input Energy Purchased	MUs	Monthly Electricity bills of NPCL
2	Transmission Loss	%	Internal Data base and Calculation Sheet as per BEE Format
3	Energy sold outside the periphery	MUs	SAP Statement
4	Open access sale	MUs	SAP Statement
5	EHT sale	MUs	SAP Statement
6	% of metering available at DT	%	Internal Data base
7	% of metering available at consumer end	%	Internal Data base
8	No of feeders at 66kV voltage level	Nos.	N/A
9	No of feeders at 33kV voltage level	Nos.	Internal Data base
10	No of feeders at 11kV voltage level	Nos.	Internal Data base
11	No of LT feeders' level	Nos.	Internal Data base
12	Line length (ckt. km) at 66kV voltage level	Km	Internal Data base
13	Line length (ckt. km) at 33kV voltage level	Km	Internal Data base
14	Line length (ckt. km) at 11kV voltage level	Km	Internal Data base
15	Line length (km) at LT level	Km	Internal Data base
16	HT/LT ratio		Internal Data base
17	Feeder wise Import & Export Energy	MUs	Internal Data base
18	Nos. of Consumers	Nos.	Tariff Petition
19	Connected Load of Consumers	MW	Internal Data base
20	Input Energy	MUs	Monthly Electricity bills
21	Consumer wise Billed Energy		Tariff Petition
22	T&D Loss	MUs	Tariff Petition
23	T&D Loss	%	Tariff Petition
24	Feeder meters accuracy and error	Document	Latest Calibration reports

Annexure- IX Calibration Reports



Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymilabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



CC-2735

Certificate No.: **YMPL/333102/122978** **ULR-CC27352100000462F** Page 1 of 4

1	Name and address of customer	:- M/s Noida Power Company Limited. 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh			
2	Reference	Service request form number :- 2020-21/1086 Date of receipt of EUC :- 22-Jan-2021 Condition of EUC on receipt :- Satisfactory			
3	Location of calibration	:- 400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh			
4	Calibration Details	Date of issue :- 24-Jan-2021 Date of calibration :- 22-Jan-2021 Due Date of calibration :- 21-Jan-2022			
5	Description of equipment under calibration	Name :- 3 Phase Energy Meter(ABT) Sr.No. :- UPP65773 Make :- Secure Meters Limited Type :- P3E Model :- Apex 150 Voltage :- 3x63.5 V (3P4W) Current :- Ib: 1A, I _{max} : 2A Voltage Ratio :- /110V/√3 Current Ratio :- /1A Class :- 0.2S For Active and Reactive Meter constant :- 256000 imp/(kWh,kVAh) Unit :- kW,kVA, kVA Frequency :- 50Hz Meter Energy			
		Initial		Final	
		Import	Export	Import	Export
	kWh	0.0090	0.0000	0.0360	-0.0280
	kVAh	0.0090	0.0000	0.0535	-0.0480
6	Environmental conditions of measurements	Temperature :- 22.4-23.1°C Relative Humidity :- 50-55% Weather :- Clear			
7	Witnessed by	:- Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida :- Mr.Vipin Kumar A.E(T&C), UPPTCL :- Mr.Parush Ram SDO(Trans.),UPPTCL			

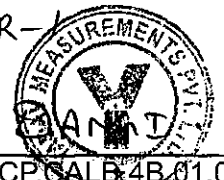
Checked by :




Prem Shankar Bhatt

Amit Anand

Approved by :

ENGINEER-
B&B
BASANT KUMAR




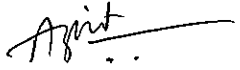
 Yadav Measurements	<h2 style="margin:0;">CERTIFICATE OF CALIBRATION</h2> <p>Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450</p>	  CC-2735
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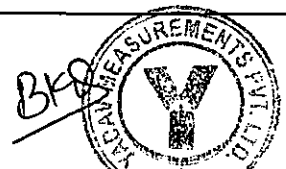
Certificate No.: **YMPL/333102/122978** ULR-CC27352100000462F Page 2 of 4

8	Description of reference standards used :-			
	Reference standard	Calibration valid up to	Traceability	Parameters
	3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9	Calibration Procedure: CP-ETCH-S-2.1			
	<p>Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.</p>			
10	Electro Technical Calibration:			
	Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.044	2.00
		1	UPF	-0.04	0.20	0.037	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.045	2.00
		0.5	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.01	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.1	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.05	UPF	-0.09	0.20	0.050	2.00
		0.02	0.5 Ind	0.04	0.50	0.098	2.00
			0.8 Cap	0.02	0.50	0.061	2.00
		0.01	UPF	0.01	0.40	0.082	2.00

Checked by : 	Approved by : 
---	--





Yadav Measurements

CERTIFICATE OF CALIBRATION

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 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
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 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333102/122978** **ULR-CC27352100000462F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.052	2.00
			0.8 Cap	-0.05	0.30	0.059	2.00
		1	1	-0.04	0.20	0.037	2.00
			0.5 Ind	-0.03	0.30	0.053	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		0.5	1	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		0.1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.053	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.05	1	0.01	0.20	0.053	2.00
		0.02	0.5 Ind	-0.04	0.50	0.091	2.00
			0.8 Cap	-0.07	0.50	0.060	2.00
		0.01	1	-0.03	0.40	0.074	2.00

C. 3 phase 4 wire balance mode Export Active energy measurement :-

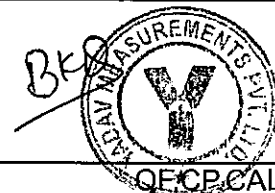
EUC Range	Applied Voltage	Applied Current (A)	Cos ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		1	UPF	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.02	0.30	0.044	2.00
		0.5	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.1	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.05	UPF	0.01	0.20	0.050	2.00
		0.02	0.5 Ind	-0.04	0.50	0.098	2.00
			0.8 Cap	-0.03	0.50	0.061	2.00
		0.01	UPF	0.14	0.40	0.082	2.00

Checked by :

Ban

Amit

Approved by :





Yadav Measurements

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 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymlabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333102/122978** **ULR-CC273521000000462F** Page 4 of 4

D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.052	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		1	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.053	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.5	1	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.03	0.30	0.059	2.00
		0.1	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.052	2.00
			0.8 Cap	-0.06	0.30	0.060	2.00
		0.05	1	0.01	0.20	0.053	2.00
		0.02	0.5 Ind	-0.05	0.50	0.091	2.00
			0.8 Cap	-0.07	0.50	0.059	2.00
		0.01	1	-0.04	0.40	0.074	2.00

11. REMARKS :-

- For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- For k≠2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
- The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
- Calibration points and due date mentioned as per customer's requirement.
- Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
- The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
- Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymlabs.com
- This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
- The results reported related only to the equipment calibrated.
- Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
- The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - when consideration of MU is not inherent in standard / specification of the test / calibration and;
If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

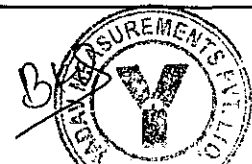
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Checked by :




Pam

Approved by :

Amit

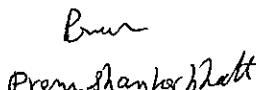
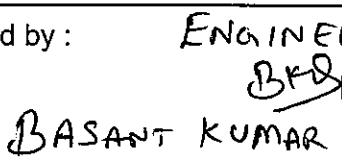






QF-CP.CALB.4B.01.00

 Yadav Measurements	CERTIFICATE OF CALIBRATION	  CC-2735
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333102/122977** **ULR-CC27352100000461F** Page 1 of 4

1	Name and address of customer	:-	M/s Noida Power Company Limited. 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh				
2	Reference	Service request form number	:- 2020-21/1086				
		Date of receipt of EUC	:- 22-Jan-2021				
		Condition of EUC on receipt	:- Satisfactory				
3	Location of calibration	:-	400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh				
4	Calibration Details	Date of issue	:- 24-Jan-2021				
		Date of calibration	:- 22-Jan-2021				
		Due Date of calibration	:- 21-Jan-2022				
		Description of equipment under calibration					
5	Name	:-	3 Phase Energy Meter(ABT)				
	Sr.No.	:-	UPP65772				
	Make	:-	Secure Meters Limited				
	Type	:-	P3E				
	Model	:-	Apex 150				
	Voltage	:-	3x63.5 V (3P4W)				
	Current	:-	Ib: 1A, I _{max} : 2A				
	Voltage Ratio	:-	-/110V/√3				
	Current Ratio	:-	-/1A				
	Class	:-	0.2S For Active and Reactive				
	Meter constant	:-	256000 imp/(kWh,kVArh)				
	Unit	:-	kW,kVA, kVA				
	Frequency	:-	50Hz				
	Meter Energy		:-	Initial		Final	
				Import	Export	Import	Export
		kWh	0.0035	0.0000	0.0305	-0.0280	
		kVAh	0.0035	0.0000	0.0485	-0.0480	
6	Environmental conditions of measurements	Temperature	:- 22.4-23.1°C				
		Relative Humidity	:- 50-55%				
		Weather	:- Clear				
		7 Witnessed by					
		:-	Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida				
		:-	Mr.Vipin Kumar A.E(T&C), UPPTCL				
		:-	Mr.Parush Ram SDO(Trans.),UPPTCL				

Checked by :  Prem Shankar Bhatt	Approved by : ENGINEER  BASANT KUMAR 
--	--

 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	 
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: YMPL/333102/122977



ULR-CC27352100000461F

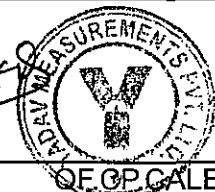
Page 2 of 4

8	Description of reference standards used :-								
	<table border="1"> <thead> <tr> <th>Reference standard</th> <th>Calibration valid up to</th> <th>Traceability</th> <th>Parameters</th> </tr> </thead> <tbody> <tr> <td> 3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000 </td> <td align="center">19-Nov-2021</td> <td align="center">IDEMI, Mumbai & NPL, New Delhi Via YMPL</td> <td align="center">Active Energy, Reactive Energy</td> </tr> </tbody> </table>	Reference standard	Calibration valid up to	Traceability	Parameters	3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
Reference standard	Calibration valid up to	Traceability	Parameters						
3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy						
9	Calibration Procedure: CP-ETCH-S-2.1 Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.								
10	Electro Technical Calibration: Results: - The calibration results are given below.								

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.044	2.00
		1	UPF	-0.04	0.20	0.037	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.045	2.00
		0.5	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.01	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.1	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.05	UPF	-0.09	0.20	0.050	2.00
		0.02	0.5 Ind	0.04	0.50	0.098	2.00
			0.8 Cap	0.02	0.50	0.061	2.00
		0.01	UPF	0.01	0.40	0.082	2.00

Checked by : 	Approved by : 
---	--





Yadav Measurements

CERTIFICATE OF CALIBRATION

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 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
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 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333102/122977** **ULR-CC27352100000461F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.052	2.00
			0.8 Cap	-0.05	0.30	0.059	2.00
		1	1	-0.04	0.20	0.037	2.00
			0.5 Ind	-0.03	0.30	0.053	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		0.5	1	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		0.1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.053	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.05	1	0.01	0.20	0.053	2.00
		0.02	0.5 Ind	-0.04	0.50	0.091	2.00
			0.8 Cap	-0.07	0.50	0.060	2.00
		0.01	1	-0.03	0.40	0.074	2.00

C. 3 phase 4 wire balance mode Export Active energy measurement :-




EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		1	UPF	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.02	0.30	0.044	2.00
		0.5	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.1	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.05	UPF	0.01	0.20	0.050	2.00
		0.02	0.5 Ind	-0.04	0.50	0.098	2.00
			0.8 Cap	-0.03	0.50	0.061	2.00
		0.01	UPF	0.14	0.40	0.082	2.00

Checked by :

Prerna

Approved by :



 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333102/122977** **ULR-CC273521000000461F** Page 4 of 4


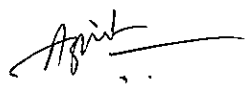
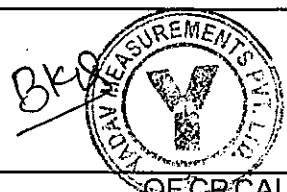
D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.052	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		1	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.053	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.5	1	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.03	0.30	0.059	2.00
		0.1	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.052	2.00
			0.8 Cap	-0.06	0.30	0.060	2.00
		0.05	1	0.01	0.20	0.053	2.00
		0.02	0.5 Ind	-0.05	0.50	0.091	2.00
			0.8 Cap	-0.07	0.50	0.059	2.00
		0.01	1	-0.04	0.40	0.074	2.00

11. REMARKS :-

- For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- For k \neq 2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
- The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
- Calibration points and due date mentioned as per customer's requirement.
- Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
- The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
- Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymllabs.com
- This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
- The results reported related only to the equipment calibrated.
- Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
- The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - when consideration of MU is not inherent in standard / specification of the test / calibration and;
If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

TL.CP.CALB.1B.01.03

Checked by : 	Approved by : 	 TL.CP.CALB.4B.01.00
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Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333102/122976** **ULR-CC27352100000460F** Page 1 of 4

1	Name and address of customer	:- M/s Noida Power Company Limited. 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh			
2	Reference				
	Service request form number	:- 2020-21/1086			
	Date of receipt of EUC	:- 22-Jan-2021			
	Condition of EUC on receipt	:- Satisfactory			
3	Location of calibration	:- 400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh			
4	Calibration Details				
	Date of issue	:- 24-Jan-2021			
	Date of calibration	:- 22-Jan-2021			
	Due Date of calibration	:- 21-Jan-2022			
5	Description of equipment under calibration				
	Name	:- 3 Phase Energy Meter(ABT)			
	Sr.No.	:- UPP65771			
	Make	:- Secure Meters Limited			
	Type	:- P3E			
	Model	:- Apex 150			
	Voltage	:- 3x63.5 V (3P4W)			
	Current	:- Ib: 1A, I _{max} : 2A			
	Voltage Ratio	:- -/110V/√3			
	Current Ratio	:- -/1A			
	Class	:- 0.2S For Active and Reactive			
	Meter constant	:- 256000 imp/(kWh, kVAh)			
	Unit	:- kW, kVAh, kVA			
	Frequency	:- 50Hz			
	Meter Energy	Initial		Final	
		Import	Export	Import	Export
	kWh	0.0030	0.0000	0.0315	-0.0380
	kVAh	0.0030	0.0000	0.0505	-0.0580
6	Environmental conditions of measurements				
	Temperature	:- 22.4-23.1°C			
	Relative Humidity	:- 50-55%			
	Weather	:- Clear			
7	Witnessed by				
		:- Mr. Navin Kumar Dy. Manager, NPCL, Greater Noida			
		:- Mr. Vipin Kumar A.E(T&C), UPPTCL			
		:- Mr. Parush Ram SDO(Trans.), UPPTCL			

Checked by :




Prem Shanker Bhatt
Prem Shanker Bhatt

Arpit Panchoy
Arpit Panchoy

Approved by :

BASANT KUMAR
ENGINEER
BKB
BASANT KUMAR





 Yadav Measurements	CERTIFICATE OF CALIBRATION	 
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

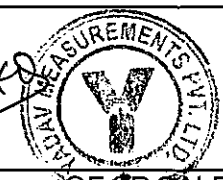
Certificate No.: **YMPL/333102/122976** **ULR-CC273521000000460F** Page 2 of 4




8	Description of reference standards used :-			
	Reference standard	Calibration valid up to	Traceability	Parameters
	3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9	Calibration Procedure: CP-ETCH-S-2.1			
	<p>Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.</p>			
10	Electro Technical Calibration:			
	Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.06	0.30	0.044	2.00
		1	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.044	2.00
		0.5	UPF	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.1	UPF	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.08	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.05	UPF	0.01	0.20	0.050	2.00
		0.02	0.5 Ind	-0.04	0.50	0.098	2.00
			0.8 Cap	-0.05	0.50	0.061	2.00
		0.01	UPF	-0.06	0.40	0.082	2.00

Checked by : 	Approved by : 
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 Yadav Measurements	<h2 style="margin: 0;">CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	<p>Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas , Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450</p>	

Certificate No.: **YMPL/333102/122976** **ULR-CC27352100000460F** Page 3 of 4

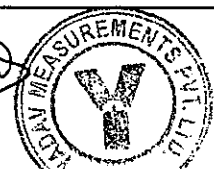
B. 3 phase 4 wire balance mode Import Reactive energy measurement :-




EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.06	0.30	0.059	2.00
		1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.06	0.30	0.059	2.00
		0.5	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.09	0.30	0.052	2.00
			0.8 Cap	-0.02	0.30	0.060	2.00
		0.1	1	-0.01	0.20	0.035	2.00
			0.5 Ind	-0.06	0.30	0.052	2.00
			0.8 Cap	0.01	0.30	0.059	2.00
		0.05	1	-0.01	0.20	0.053	2.00
		0.02	0.5 Ind	-0.04	0.50	0.091	2.00
			0.8 Cap	-0.02	0.50	0.059	2.00
		0.01	1	-0.02	0.40	0.074	2.00

C. 3 phase 4 wire balance mode Export Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		1	UPF	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.047	2.00
			0.8 Cap	-0.07	0.30	0.044	2.00
		0.5	UPF	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.08	0.30	0.048	2.00
			0.8 Cap	-0.06	0.30	0.044	2.00
		0.1	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		0.05	UPF	0.01	0.20	0.050	2.00
		0.02	0.5 Ind	-0.02	0.50	0.098	2.00
			0.8 Cap	-0.05	0.50	0.061	2.00
		0.01	UPF	-0.05	0.40	0.082	2.00

<p>Checked by :</p> <p style="text-align: center;"><i>Pran</i></p>	<p>Approved by :</p> <p style="text-align: center;"><i>BKD</i></p>
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 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymlabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333102/122976** **ULR-CC273521000000460F** Page 4 of 4



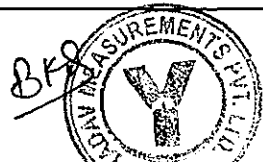
D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.052	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		1	1	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.05	0.30	0.059	2.00
		0.5	1	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.053	2.00
			0.8 Cap	-0.06	0.30	0.059	2.00
		0.1	1	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.052	2.00
			0.8 Cap	-0.07	0.30	0.060	2.00
		0.05	1	0.01	0.20	0.053	2.00
		0.02	0.5 Ind	-0.02	0.50	0.091	2.00
			0.8 Cap	-0.05	0.50	0.059	2.00
		0.01	1	-0.03	0.40	0.074	2.00

11. REMARKS :-

- For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- For k≠2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
- The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
- Calibration points and due date mentioned as per customer's requirement.
- Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
- The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
- Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymlabs.com
- This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
- The results reported related only to the equipment calibrated.
- Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
- The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - when consideration of MU is not inherent in standard / specification of the test / calibration and;
If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

TL.CP.CALB.1B.01.03

Checked by : 	Approved by : 	
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TL.CP.CALB.4B.01.00



Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333102/122975** **ULR-CC27352100000459F** Page 1 of 4

1	Name and address of customer	:- M/s Noida Power Company Limited. 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh		
2	Reference	:-		
	Service request form number	:- 2020-21/1086		
	Date of receipt of EUC	:- 22-Jan-2021		
	Condition of EUC on receipt	:- Satisfactory		
3	Location of calibration	:- 400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh		
4	Calibration Details	:-		
	Date of issue	:- 24-Jan-2021		
	Date of calibration	:- 22-Jan-2021		
	Due Date of calibration	:- 21-Jan-2022		
5	Description of equipment under calibration	:-		
	Name	:- 3 Phase Energy Meter(ABT)		
	Sr.No.	:- UPP65770		
	Make	:- Secure Meters Limited		
	Type	:- P3E		
	Model	:- Apex 150		
	Voltage	:- 3x63.5 V (3P4W)		
	Current	:- Ib: 1A, I _{max} : 2A		
	Voltage Ratio	:- -/110V/√3		
	Current Ratio	:- -/1A		
	Class	:- 0.2S For Active and Reactive		
	Meter constant	:- 256000 imp/(kWh,kVAh)		
	Unit	:- kW,kVAh,kVA		
	Frequency	:- 50Hz		
	Meter Energy	Initial		Final
		Import	Export	Import Export
	kWh	0.0030	0.0000	0.0315 -0.0380
	kVAh	0.0030	0.0000	0.0500 -0.0580
6	Environmental conditions of measurements	:-		
	Temperature	:- 22.4-23.1°C		
	Relative Humidity	:- 50-55%		
	Weather	:- Clear		
7	Witnessed by	:-		
		:- Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida		
		:- Mr.Vipin Kumar A.E(T&C), UPPTCL		
		:- Mr.Parush Ram SDO(Trans.),UPPTCL		

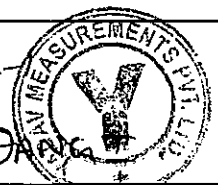
Checked by :




Prem
Prem Shankar Shetty

Agnit
Agnit Panchoy

Approved by :

ENGINEER
BKB
BASANT KUMAR




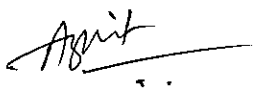

 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333102/122975** **ULR-CC27352100000459F** Page 2 of 4

8	Description of reference standards used :-			
	Reference standard	Calibration valid up to	Traceability	Parameters
	3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9	Calibration Procedure: CP-ETCH-S-2.1 Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.			
10	Electro Technical Calibration: Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.047	2.00
			0.8 Cap	-0.07	0.30	0.044	2.00
		1	UPF	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.047	2.00
			0.8 Cap	-0.09	0.30	0.044	2.00
		0.5	UPF	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.1	UPF	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.09	0.30	0.047	2.00
			0.8 Cap	-0.02	0.30	0.045	2.00
		0.05	UPF	-0.01	0.20	0.050	2.00
		0.02	0.5 Ind	-0.02	0.50	0.098	2.00
			0.8 Cap	-0.04	0.50	0.060	2.00
		0.01	UPF	-0.04	0.40	0.082	2.00

Checked by : 	Approved by : 	
---	--	---



Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



CC-2735

Certificate No.: **YMPL/333102/122975** **ULR-CC273521000000459F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.08	0.30	0.052	2.00
			0.8 Cap	-0.07	0.30	0.059	2.00
		1	1	-0.09	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.052	2.00
			0.8 Cap	-0.09	0.30	0.059	2.00
		0.5	1	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.09	0.30	0.052	2.00
			0.8 Cap	-0.06	0.30	0.059	2.00
		0.1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.10	0.30	0.052	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		0.05	1	-0.04	0.20	0.053	2.00
		0.02	0.5 Ind	-0.02	0.50	0.091	2.00
			0.8 Cap	-0.04	0.50	0.059	2.00
		0.01	1	-0.04	0.40	0.074	2.00

C. 3 phase 4 wire balance mode Export Active energy measurement :-

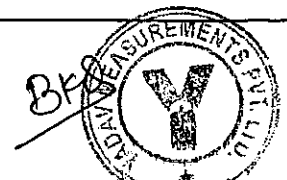
EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.08	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		1	UPF	-0.07	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.047	2.00
			0.8 Cap	-0.08	0.30	0.045	2.00
		0.5	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.08	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		0.1	UPF	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.08	0.30	0.047	2.00
			0.8 Cap	-0.02	0.30	0.044	2.00
		0.05	UPF	-0.03	0.20	0.050	2.00
		0.02	0.5 Ind	-0.02	0.50	0.098	2.00
			0.8 Cap	-0.05	0.50	0.061	2.00
		0.01	UPF	-0.03	0.40	0.082	2.00

Checked by :

Pran

Approved by :

Amit





Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIFCO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333102/122975** **ULR-CC27352100000459F** Page 4 of 4

D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.05	0.30	0.059	2.00
		1	1	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.052	2.00
			0.8 Cap	-0.05	0.30	0.059	2.00
		0.5	1	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.08	0.30	0.052	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.1	1	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.053	2.00
			0.8 Cap	-0.05	0.30	0.060	2.00
		0.05	1	-0.02	0.20	0.053	2.00
		0.02	0.5 Ind	-0.07	0.50	0.091	2.00
			0.8 Cap	-0.07	0.50	0.059	2.00
		0.01	1	-0.04	0.40	0.074	2.00

11. REMARKS :-

- For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- For k≠2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
- The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
- Calibration points and due date mentioned as per customer's requirement.
- Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
- The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
- Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymllabs.com
- This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
- The results reported related only to the equipment calibrated.
- Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
- The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - when consideration of MU is not inherent in standard / specification of the test / calibration and; If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

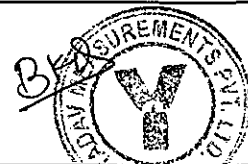
TL.CP.CALB.1B.01.03

Checked by :





Prem

Approved by :

Agant

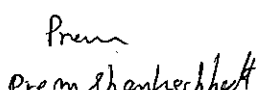
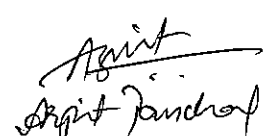
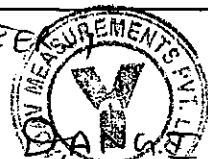





QF/CP.CALB.4B.01.00

 Yadav Measurements	<h2 style="margin:0;">CERTIFICATE OF CALIBRATION</h2> <p>Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450</p>	  CC-2735	
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Certificate No.: **YMPL/333101/122974** **ULR-CC27352100000458F** Page 1 of 4

1	Name and address of customer	:-	M/s Noida Power Company Limited. 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh	
2	Reference			
	Service request form number	:-	2020-21/1086	
	Date of receipt of EUC	:-	21-Jan-2021	
	Condition of EUC on receipt	:-	Satisfactory	
3	Location of calibration	:-	400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh	
4	Calibration Details			
	Date of issue	:-	24-Jan-2021	
	Date of calibration	:-	21-Jan-2021	
	Due Date of calibration	:-	20-Jan-2022	
5	Description of equipment under calibration			
	Name	:-	3 Phase Energy Meter(ABT)	
	Sr.No.	:-	UPP65769	
	Make	:-	Secure Meters Limited	
	Type	:-	P3E	
	Model	:-	Apex 150	
	Voltage	:-	3x63.5 V (3P4W)	
	Current	:-	Ib: 1A, I _{max} : 2A	
	Voltage Ratio	:-	-/110V/√3	
	Current Ratio	:-	-/1A	
	Class	:-	0.2S For Active and Reactive	
	Meter constant	:-	256000 imp/(kWh,kVArh)	
	Unit	:-	kW,kVAr,kVA	
	Frequency	:-	50Hz	
	Meter Energy		Initial	Final
			Import	Export
	kWh		0.0030	0.0000
	kVAh		0.0030	0.0000
			0.0305	-0.0400
			0.0480	-0.0570
6	Environmental conditions of measurements			
	Temperature	:-	24.2-25.1°C	
	Relative Humidity	:-	50-55%	
	Weather	:-	Clear	
7	Witnessed by			
		:-	Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida	
		:-	Mr.Vipin Kumar A.E(T&C), UPPTCL	
		:-	Mr.Parush Ram SDO(Trans.),UPPTCL	

Checked by :  Prem Shanker	Approved by :  BASANT KUMAR 
--	---

 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	 
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: YMPL/333101/122974


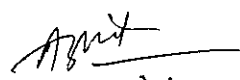

ULR-CC27352100000458F

Page 2 of 4

8	Description of reference standards used :-			
	Reference standard	Calibration valid up to	Traceability	Parameters
	3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9	Calibration Procedure: CP-ETCH-S-2.1 Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.			
10	Electro Technical Calibration: Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.048	2.00
			0.8 Cap	-0.02	0.30	0.045	2.00
		1	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.02	0.30	0.045	2.00
		0.5	UPF	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.1	UPF	-0.01	0.20	0.035	2.00
			0.5 Ind	-0.03	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		0.05	UPF	-0.03	0.20	0.051	2.00
		0.02	0.5 Ind	0.02	0.50	0.098	2.00
			0.8 Cap	-0.02	0.50	0.061	2.00
		0.01	UPF	0.01	0.40	0.081	2.00

Checked by : 	Approved by : 	
---	--	---



Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



CC-2735

Certificate No.: **YMPL/333101/122974** **ULR-CC27352100000458F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.052	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		1	1	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.052	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		0.5	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.053	2.00
			0.8 Cap	-0.08	0.30	0.060	2.00
		0.1	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.03	0.30	0.060	2.00
		0.05	1	0.02	0.20	0.053	2.00
		0.02	0.5 Ind	-0.01	0.50	0.091	2.00
			0.8 Cap	0.02	0.50	0.060	2.00
		0.01	1	0.01	0.40	0.074	2.00

C. 3 phase 4 wire balance mode Export Active energy measurement :-

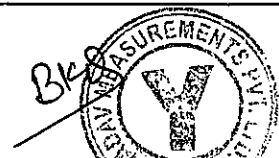
EUC Range	Applied Voltage	Applied Current (A)	Cos ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		1	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.01	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.044	2.00
		0.5	UPF	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		0.1	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.046	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.05	UPF	0.01	0.20	0.050	2.00
		0.02	0.5 Ind	0.09	0.50	0.098	2.00
			0.8 Cap	0.08	0.50	0.061	2.00
		0.01	UPF	-0.03	0.40	0.082	2.00




Checked by :

Pram

Approved by :

Amit



 Yadav Measurements	<h2 style="margin: 0;">CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	<p>Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450</p>	

Certificate No.: **YMPL/333101/122974** **ULR-CC27352100000458F** Page 4 of 4


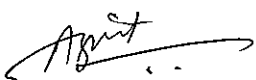
D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

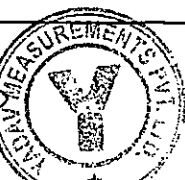
EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.03	0.20	0.037	2.00
			0.5 Ind	-0.04	0.30	0.052	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.052	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		0.5	1	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.052	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		0.1	1	-0.01	0.20	0.036	2.00
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			0.8 Cap	0.00	0.30	0.060	2.00
		0.05	1	0.02	0.20	0.053	2.00
		0.02	0.5 Ind	-0.02	0.50	0.091	2.00
			0.8 Cap	0.02	0.50	0.059	2.00
		0.01	1	-0.02	0.40	0.074	2.00

11. REMARKS :-




1. For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
2. For k≠2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
3. This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
4. The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
5. Calibration points and due date mentioned as per customer's requirement.
6. Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
7. The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
8. Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymllabs.com
9. This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
10. The results reported related only to the equipment calibrated.
11. Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
12. The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - (a) as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - (b) when consideration of MU is not inherent in standard / specification of the test / calibration and;
If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

TL.CP.CALB.1B.01.03

Checked by : 	Approved by : 
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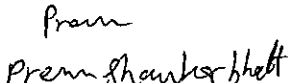
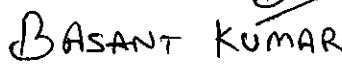






QF.CP.CALB.4B.01.00

 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	 
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333101/122973** **ULR-CC273521000000457F** Page 1 of 4

1	Name and address of customer	:- M/s Noida Power Company Limited. 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh			
	2	Reference	Service request form number :- 2020-21/1086		
Date of receipt of EUC		:- 21-Jan-2021			
Condition of EUC on receipt		:- Satisfactory			
3	Location of calibration	:- 400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh			
4	Calibration Details	Date of issue :- 24-Jan-2021			
	Date of calibration	:- 21-Jan-2021			
	Due Date of calibration	:- 20-Jan-2022			
	5	Description of equipment under calibration	Name :- 3 Phase Energy Meter(ABT)		
Sr.No.		:- UPP65768			
Make		:- Secure Meters Limited			
Type		:- P3E			
Model		:- Apex 150			
Voltage		:- 3x63.5 V (3P4W)			
Current		:- Ib: 1A, I _{max} : 2A			
Voltage Ratio		:- -/110V/√3			
Current Ratio		:- -/1A			
Class		:- 0.2S For Active and Reactive			
Meter constant		:- 256000 imp/(kWh,kVArh)			
Unit		:- kW,kVA, kVA			
Frequency		:- 50Hz			
Meter Energy			Initial		Final
		Import	Export	Import	Export
	kWh	0.0035	0.0000	0.0310	-0.0400
	kVAh	0.0035	0.0000	0.0485	-0.0570
6	Environmental conditions of measurements	Temperature :- 24.2-25.1°C			
	Relative Humidity	:- 50-55%			
	Weather	:- Clear			
7	Witnessed by	:- Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida			
		:- Mr.Vipin Kumar A.E(T&C), UPPTCL			
		:- Mr.Parush Ram SDO(Trans.),UPPTCL			

Checked by :  Prem Shanker Bhatt	Approved by : ENGINEER  BASANT KUMAR 
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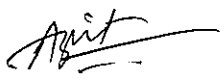

 Yadav Measurements	<h2 style="margin: 0;">CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	<p>Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450</p>	

Certificate No.: **YMPL/333101/122973** **ULR-CC273521000000457F** Page 2 of 4

8	Description of reference standards used :-			
	Reference standard	Calibration valid up to	Traceability	Parameters
	3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9	Calibration Procedure: CP-ETCH-S-2.1			
	<p>Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.</p>			
10	Electro Technical Calibration:			
	Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.044	2.00
		1	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		0.5	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.1	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.05	UPF	0.02	0.20	0.050	2.00
		0.02	0.5 Ind	-0.04	0.50	0.098	2.00
			0.8 Cap	-0.03	0.50	0.061	2.00
		0.01	UPF	0.01	0.40	0.082	2.00

Checked by : 	Approved by : 
	



Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RILCO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333101/122973** **ULR-CC273521000000457F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.053	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		1	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.053	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		0.5	1	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.052	2.00
			0.8 Cap	-0.05	0.30	0.060	2.00
		0.1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.06	0.30	0.059	2.00
		0.05	1	0.02	0.20	0.053	2.00
		0.02	0.5 Ind	-0.01	0.50	0.091	2.00
			0.8 Cap	-0.02	0.50	0.059	2.00
		0.01	1	-0.01	0.40	0.075	2.00

C. 3 phase 4 wire balance mode Export Active energy measurement :-

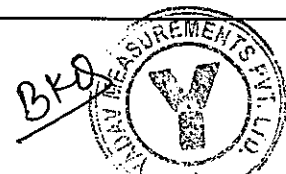
EUC Range	Applied Voltage	Applied Current (A)	Cos ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.01	0.30	0.047	2.00
			0.8 Cap	-0.02	0.30	0.044	2.00
		1	UPF	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.5	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		0.1	UPF	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.048	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		0.05	UPF	0.02	0.20	0.050	2.00
		0.02	0.5 Ind	0.09	0.50	0.098	2.00
			0.8 Cap	0.02	0.50	0.061	2.00
		0.01	UPF	-0.02	0.40	0.082	2.00




Checked by :

Prem

Approved by :

Anil



 Yadav Measurements	<h2 style="margin: 0;">CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	<p>Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450</p>	

Certificate No.: **YMPL/333101/122973** **ULR-CC27352100000457F** Page 4 of 4



D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

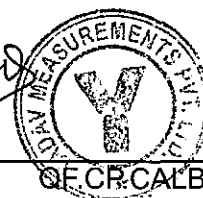
EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.04	0.20	0.037	2.00
			0.5 Ind	-0.06	0.30	0.053	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		1	1	-0.05	0.20	0.037	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.5	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.05	0.30	0.059	2.00
		0.1	1	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.052	2.00
			0.8 Cap	0.01	0.30	0.059	2.00
		0.05	1	0.05	0.20	0.053	2.00
		0.02	0.5 Ind	0.02	0.50	0.092	2.00
			0.8 Cap	-0.03	0.50	0.060	2.00
		0.01	1	-0.01	0.40	0.074	2.00

11. REMARKS :-




1. For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
2. For k≠2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
3. This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
4. The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
5. Calibration points and due date mentioned as per customer's requirement.
6. Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
7. The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
8. Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymllabs.com
9. This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
10. The results reported related only to the equipment calibrated.
11. Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
12. The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - (a) as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - (b) when consideration of MU is not inherent in standard / specification of the test / calibration and;
If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

TL.CP.CALB.1B.01.03

Checked by : 	Approved by : 
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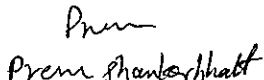







OF CR.CALB.4B.01.00

 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	 
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333101/122972** **ULR-CC27352100000456F** Page 1 of 4

1	Name and address of customer	:- M/s Noida Power Company Limited. 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh			
		2 Reference			
	Service request form number	:- 2020-21/1086			
	Date of receipt of EUC	:- 21-Jan-2021			
	Condition of EUC on receipt	:- Satisfactory			
3	Location of calibration	:- 400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh			
4	Calibration Details				
	Date of issue	:- 24-Jan-2021			
	Date of calibration	:- 21-Jan-2021			
	Due Date of calibration	:- 20-Jan-2022			
5	Description of equipment under calibration				
	Name	:- 3 Phase Energy Meter(ABT)			
	Sr.No.	:- UPP65767			
	Make	:- Secure Meters Limited			
	Type	:- P3E			
	Model	:- Apex 150			
	Voltage	:- 3x63.5 V (3P4W)			
	Current	:- Ib: 1A, I _{max} : 2A			
	Voltage Ratio	:- -/110V/√3			
	Current Ratio	:- -/1A			
	Class	:- 0.2S For Active and Reactive			
	Meter constant	:- 256000 imp/(kWh,kVArh)			
	Unit	:- kW,kVAr,kVA			
	Frequency	:- 50Hz			
	Meter Energy		Initial		Final
		Import	Export	Import	Export
	kWh	0.0065	0.0000	0.0420	-0.0370
	kVAh	0.0065	0.0000	0.0630	-0.0555
6	Environmental conditions of measurements				
	Temperature	:- 24.2-25.1°C			
	Relative Humidity	:- 50-55%			
	Weather	:- Clear			
7	Witnessed by				
		:- Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida			
		:- Mr.Vipin Kumar A.E(T&C), UPPTCL			
		:- Mr.Parush Ram SDO(Trans.),UPPTCL			

Checked by :  Prem Shankar Shastri	Approved by : ENGINEER  BASANT KUMAR	
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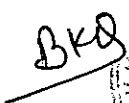
 Yadav Measurements	<h2 style="margin: 0;">CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	<p>Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450</p>	

Certificate No.: **YMPL/333101/122972** **ULR-CC27352100000456F** Page 2 of 4

8	Description of reference standards used :-			
	Reference standard	Calibration valid up to	Traceability	Parameters
	3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9	Calibration Procedure: CP-ETCH-S-2.1			
	<p>Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.</p>			
10	Electro Technical Calibration:			
	Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		1	UPF	-0.03	0.20	0.037	2.00
			0.5 Ind	-0.03	0.30	0.046	2.00
			0.8 Cap	-0.02	0.30	0.044	2.00
		0.5	UPF	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.08	0.30	0.048	2.00
			0.8 Cap	-0.05	0.30	0.043	2.00
		0.1	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.047	2.00
			0.8 Cap	-0.06	0.30	0.045	2.00
		0.05	UPF	0.01	0.20	0.050	2.00
		0.02	0.5 Ind	0.07	0.50	0.098	2.00
			0.8 Cap	0.02	0.50	0.061	2.00
		0.01	UPF	-0.02	0.40	0.082	2.00

Checked by : 	Approved by : 
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Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RILCO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333101/122972** **ULR-CC273521000000456F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.053	2.00
			0.8 Cap	-0.06	0.30	0.059	2.00
		1	1	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.053	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.5	1	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		0.1	1	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.09	0.30	0.052	2.00
			0.8 Cap	0.00	0.30	0.060	2.00
		0.05	1	0.01	0.20	0.053	2.00
		0.02	0.5 Ind	-0.03	0.50	0.091	2.00
			0.8 Cap	-0.05	0.50	0.059	2.00
		0.01	1	-0.04	0.40	0.074	2.00

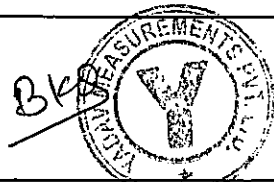
C. 3 phase 4 wire balance mode Export Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.03	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		1	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.5	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.1	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.048	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.05	UPF	0.01	0.20	0.050	2.00
		0.02	0.5 Ind	-0.01	0.50	0.098	2.00
			0.8 Cap	-0.06	0.50	0.061	2.00
		0.01	UPF	-0.02	0.40	0.082	2.00

Checked by :

Prem

Approved by :





Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333101/122972** **ULR-CC27352100000456F** Page 4 of 4
D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		1	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.052	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.5	1	-0.02	0.20	0.037	2.00
			0.5 Ind	-0.08	0.30	0.053	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		0.1	1	-0.01	0.20	0.035	2.00
			0.5 Ind	-0.03	0.30	0.052	2.00
			0.8 Cap	0.00	0.30	0.060	2.00
		0.05	1	-0.02	0.20	0.053	2.00
		0.02	0.5 Ind	0.01	0.50	0.091	2.00
			0.8 Cap	0.01	0.50	0.059	2.00
		0.01	1	-0.03	0.40	0.074	2.00

11. REMARKS :-

- For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- For k≠2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
- The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
- Calibration points and due date mentioned as per customer's requirement.
- Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
- The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
- Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymllabs.com
- This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
- The results reported related only to the equipment calibrated.
- Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
- The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - when consideration of MU is not inherent in standard / specification of the test / calibration and;
If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

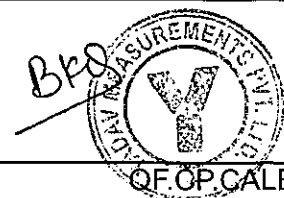
TL.CP.CALB.1B.01.03

Checked by :




Pram

Approved by :

Amit

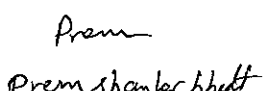

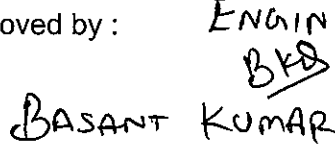






OF CP CALB.4B.01.00

 <p>Yadav Measurements</p>	<h2>CERTIFICATE OF CALIBRATION</h2>	 
	<p>Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450</p>	

Certificate No.: **YMPL/333101/122971** **ULR-CC27352100000455F** Page 1 of 4

1	Name and address of customer	:- M/s Noida Power Company Limited, 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh			
		2 Reference			
	Service request form number	:- 2020-21/1086			
	Date of receipt of EUC	:- 21-Jan-2021			
	Condition of EUC on receipt	:- Satisfactory			
3	Location of calibration	:- 400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh			
4	Calibration Details				
	Date of issue	:- 24-Jan-2021			
	Date of calibration	:- 21-Jan-2021			
	Due Date of calibration	:- 20-Jan-2022			
5	Description of equipment under calibration				
	Name	:- 3 Phase Energy Meter(ABT)			
	Sr.No.	:- UPP65766			
	Make	:- Secure Meters Limited			
	Type	:- P3E			
	Model	:- Apex 150			
	Voltage	:- 3x63.5 V (3P4W)			
	Current	:- Ib: 1A, I _{max} : 2A			
	Voltage Ratio	:- -/110V/√3			
	Current Ratio	:- -/1A			
	Class	:- 0.2S For Active and Reactive			
	Meter constant	:- 256000 imp/(kWh,kVArh)			
	Unit	:- kW,kVA,r,kVA			
	Frequency	:- 50Hz			
	Meter Energy		Initial		Final
		Import	Export	Import	Export
	kWh	0.0040	0.0000	0.0395	-0.0370
	kVAh	0.0040	0.0000	0.0605	-0.0555
6	Environmental conditions of measurements				
	Temperature	:- 24.2-25.1°C			
	Relative Humidity	:- 50-55%			
	Weather	:- Clear			
7	Witnessed by				
		:- Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida			
		:- Mr.Vipin Kumar A.E(T&C), UPPTCL			
		:- Mr.Parush Ram SDO(Trans.),UPPTCL			

Checked by : 	Approved by : 	ENGINEER 	
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 Yadav Measurements	CERTIFICATE OF CALIBRATION	 
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: YMPL/333101/122971 ULR-CC27352100000455F Page 2 of 4

8 Description of reference standards used :-			
Reference standard	Calibration valid up to	Traceability	Parameters
3 Phase Reference Standard El No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9 Calibration Procedure: CP-ETCH-S-2.1			
Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.			
10 Electro Technical Calibration:			
Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		1	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.045	2.00
		0.5	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		0.1	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.046	2.00
			0.8 Cap	-0.06	0.30	0.045	2.00
		0.05	UPF	-0.01	0.20	0.050	2.00
		0.02	0.5 Ind	0.12	0.50	0.098	2.00
			0.8 Cap	0.06	0.50	0.061	2.00
		0.01	UPF	-0.03	0.40	0.082	2.00

Checked by : <i>Prem</i>	Approved by : <i>AKD</i>
---------------------------------	---------------------------------





Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333101/122971** **ULR-CC273521000000455F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.03	0.20	0.037	2.00
			0.5 Ind	-0.03	0.30	0.052	2.00
			0.8 Cap	-0.02	0.30	0.059	2.00
		1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.053	2.00
			0.8 Cap	-0.05	0.30	0.059	2.00
		0.5	1	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.053	2.00
			0.8 Cap	-0.03	0.30	0.059	2.00
		0.1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.07	0.30	0.053	2.00
			0.8 Cap	0.01	0.30	0.059	2.00
		0.05	1	0.01	0.20	0.053	2.00
		0.02	0.5 Ind	-0.02	0.50	0.091	2.00
			0.8 Cap	-0.03	0.50	0.059	2.00
		0.01	1	-0.02	0.40	0.075	2.00

C. 3 phase 4 wire balance mode Export Active energy measurement :-

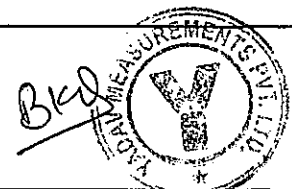
EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.06	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.048	2.00
			0.8 Cap	-0.04	0.30	0.044	2.00
		1	UPF	-0.05	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.048	2.00
			0.8 Cap	-0.03	0.30	0.044	2.00
		0.5	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.047	2.00
			0.8 Cap	-0.06	0.30	0.043	2.00
		0.1	UPF	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.046	2.00
			0.8 Cap	-0.04	0.30	0.045	2.00
		0.05	UPF	0.01	0.20	0.050	2.00
		0.02	0.5 Ind	-0.05	0.50	0.098	2.00
			0.8 Cap	-0.05	0.50	0.061	2.00
		0.01	UPF	-0.02	0.40	0.082	2.00




Checked by :

Prem

Approved by :

Asmit



 Yadav Measurements	<h1>CERTIFICATE OF CALIBRATION</h1>		  CC-2735
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450		

Certificate No.: **YMPL/333101/122971** **ULR-CC27352100000455F** Page 4 of 4


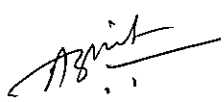
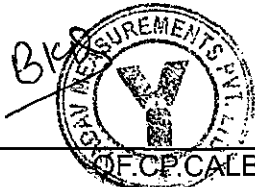
D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.05	0.30	0.052	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		1	1	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.052	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.5	1	-0.01	0.20	0.037	2.00
			0.5 Ind	-0.04	0.30	0.052	2.00
			0.8 Cap	-0.05	0.30	0.060	2.00
		0.1	1	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.052	2.00
			0.8 Cap	0.00	0.30	0.060	2.00
		0.05	1	0.02	0.20	0.053	2.00
		0.02	0.5 Ind	0.00	0.50	0.092	2.00
			0.8 Cap	-0.04	0.50	0.060	2.00
		0.01	1	-0.04	0.40	0.074	2.00

11. REMARKS :-

- For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- For k≠2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
- The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
- Calibration points and due date mentioned as per customer's requirement.
- Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
- The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
- Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymllabs.com
- This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
- The results reported related only to the equipment calibrated.
- Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
- The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - when consideration of MU is not inherent in standard / specification of the test / calibration and;
If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

TL.CP.CALB.1B.01.03

Checked by : 	Approved by : 	 TL.CP.CALB.4B.01.00
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Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333101/122970** **ULR-CC273521000000454F** Page 1 of 4

1	Name and address of customer	:- M/s Noida Power Company Limited. 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh			
2	Reference	Service request form number :- 2020-21/1086			
		Date of receipt of EUC :- 21-Jan-2021			
		Condition of EUC on receipt :- Satisfactory			
3	Location of calibration	:- 400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh			
4	Calibration Details	Date of issue :- 24-Jan-2021			
		Date of calibration :- 21-Jan-2021			
		Due Date of calibration :- 20-Jan-2022			
5	Description of equipment under calibration	Name :- 3 Phase Energy Meter(ABT)			
		Sr.No. :- UPP65765			
		Make :- Secure Meters Limited			
		Type :- P3E			
		Model :- Apex 150			
		Voltage :- 3x63.5 V (3P4W)			
		Current :- Ib: 1A, Imax: 2A			
		Voltage Ratio :- -/110V/√3			
		Current Ratio :- -/1A			
		Class :- 0.2S For Active and Reactive			
		Meter constant :- 256000 imp/(kWh,kVArh)			
		Unit :- kW,kVA,r,kVA			
		Frequency :- 50Hz			
		Meter Energy		Initial	
		Import	Export	Import	Export
kWh		0.0030	0.0000	0.0210	-0.0550
kVAh		0.0030	0.0000	0.0385	-0.0810
6	Environmental conditions of measurements	Temperature :- 24.2-25.1°C			
		Relative Humidity :- 50-55%			
		Weather :- Clear			
7	Witnessed by	:- Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida			
		:- Mr.Vipin Kumar A.E(T&C), UPPTCL			
		:- Mr.Parush Ram SDO(Trans.),UPPTCL			

Checked by :

 Prem Shankar Bhatt

Arpit Panchal

Approved by :
 ENGINEER-

 BASANT KUMAR



Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: YMPL/333101/122970

ULR-CC273521000000454F

Page 2 of 4

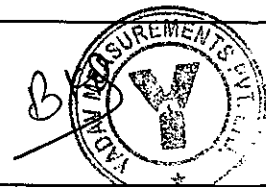
8	Description of reference standards used :-			
	Reference standard	Calibration valid up to	Traceability	Parameters
	3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9	Calibration Procedure: CP-ETCH-S-2.1			
	Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.			
10	Electro Technical Calibration:			
	Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.01	0.30	0.048	2.00
			0.8 Cap	0.01	0.30	0.044	2.00
		1	UPF	0.04	0.20	0.038	2.00
			0.5 Ind	-0.02	0.30	0.049	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.5	UPF	-0.03	0.20	0.036	2.00
			0.5 Ind	0.02	0.30	0.048	2.00
			0.8 Cap	0.01	0.30	0.044	2.00
		0.1	UPF	0.03	0.20	0.036	2.00
			0.5 Ind	0.10	0.30	0.046	2.00
			0.8 Cap	0.02	0.30	0.044	2.00
		0.05	UPF	0.06	0.20	0.050	2.00
		0.02	0.5 Ind	0.15	0.50	0.098	2.00
			0.8 Cap	0.09	0.50	0.061	2.00
		0.01	UPF	0.02	0.40	0.081	2.00

Checked by :

Approved by :





Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333101/122970** **ULR-CC273521000000454F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	0.02	0.20	0.036	2.00
			0.5 Ind	0.01	0.30	0.052	2.00
			0.8 Cap	0.01	0.30	0.059	2.00
		1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	0.04	0.30	0.052	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		0.5	1	0.01	0.20	0.036	2.00
			0.5 Ind	0.02	0.30	0.052	2.00
			0.8 Cap	0.02	0.30	0.059	2.00
		0.1	1	0.04	0.20	0.036	2.00
			0.5 Ind	0.06	0.30	0.052	2.00
			0.8 Cap	0.08	0.30	0.060	2.00
		0.05	1	0.06	0.20	0.053	2.00
		0.02	0.5 Ind	0.03	0.50	0.091	2.00
			0.8 Cap	0.07	0.50	0.059	2.00
		0.01	1	0.10	0.40	0.074	2.00

C. 3 phase 4 wire balance mode Export Active energy measurement :-

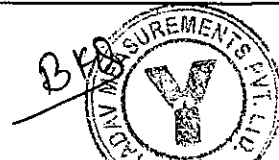
EUC Range	Applied Voltage	Applied Current (A)	Cos ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		1	UPF	0.02	0.20	0.036	2.00
			0.5 Ind	0.01	0.30	0.047	2.00
			0.8 Cap	-0.02	0.30	0.045	2.00
		0.5	UPF	-0.02	0.20	0.038	2.00
			0.5 Ind	-0.02	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.044	2.00
		0.1	UPF	0.04	0.20	0.036	2.00
			0.5 Ind	0.02	0.30	0.047	2.00
			0.8 Cap	-0.04	0.30	0.045	2.00
		0.05	UPF	0.04	0.20	0.050	2.00
		0.02	0.5 Ind	0.04	0.50	0.098	2.00
			0.8 Cap	0.08	0.50	0.061	2.00
		0.01	UPF	0.06	0.40	0.082	2.00




Checked by :

Pran

Approved by :

Pran



 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	  CC-2735
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333101/122970** **ULR-CC273521000000454F** Page 4 of 4

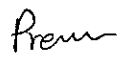
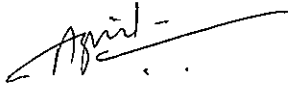

D. 3 phase 4 wire balance mode Export Reactive energy measurement :-




EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.01	0.30	0.053	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		1	1	0.01	0.20	0.039	2.00
			0.5 Ind	-0.02	0.30	0.052	2.00
			0.8 Cap	0.01	0.30	0.059	2.00
		0.5	1	0.03	0.20	0.037	2.00
			0.5 Ind	-0.02	0.30	0.052	2.00
			0.8 Cap	0.04	0.30	0.059	2.00
		0.1	1	0.02	0.20	0.036	2.00
			0.5 Ind	0.00	0.30	0.053	2.00
			0.8 Cap	0.04	0.30	0.059	2.00
		0.05	1	0.06	0.20	0.053	2.00
		0.02	0.5 Ind	0.03	0.50	0.091	2.00
			0.8 Cap	0.02	0.50	0.059	2.00
		0.01	1	0.07	0.40	0.074	2.00

11. REMARKS :-

- For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- For k≠2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k, for which a t-distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
- The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
- Calibration points and due date mentioned as per customer's requirement.
- Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
- The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
- Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymllabs.com
- This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
- The results reported related only to the equipment calibrated.
- Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
- The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - when consideration of MU is not inherent in standard / specification of the test / calibration and;
 If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

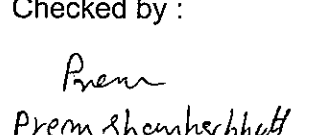


TL.CP.CALB.1B.01.03




Checked by : 	Approved by : 	 TL.CP.CALB.4B.01.00
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 Yadav Measurements	<h1>CERTIFICATE OF CALIBRATION</h1>	 
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333101/122969** **ULR-CC273521000000453F** Page 1 of 4

1	Name and address of customer	:- M/s Noida Power Company Limited, 33/11kV Electrical Sub Station, Knowledge Park-III, Greater Noida, Uttar Pradesh				
	2	Reference	Service request form number :- 2020-21/1086			
Date of receipt of EUC		:- 21-Jan-2021				
Condition of EUC on receipt		:- Satisfactory				
3	Location of calibration	:- 400/220/132/33kV GIS Sub Station, Sector 148 Noida, Uttar Pradesh				
4	Calibration Details	Date of issue :- 24-Jan-2021				
	Date of calibration	:- 21-Jan-2021				
	Due Date of calibration	:- 20-Jan-2022				
	5	Description of equipment under calibration	Name :- 3 Phase Energy Meter(ABT)			
Sr.No.		:- UPP65764				
Make		:- Secure Meters Limited				
Type		:- P3E				
Model		:- Apex 150				
Voltage		:- 3x63.5 V (3P4W)				
Current		:- Ib: 1A, I _{max} : 2A				
Voltage Ratio		:- -/110V/√3				
Current Ratio		:- -/1A				
Class		:- 0.2S For Active and Reactive				
Meter constant		:- 256000 imp/(kWh,kVArh)				
Unit		:- kW,kVAr,kVA				
Frequency		:- 50Hz				
Meter Energy			Initial		Final	
			Import	Export	Import	Export
	kWh	0.0255	0.0000	0.0435	-0.0550	
	kVAh	0.0255	0.0000	0.0600	-0.0815	
6	Environmental conditions of measurements	Temperature :- 24.2-25.1°C				
	Relative Humidity	:- 50-55%				
	Weather	:- Clear				
7	Witnessed by	:- Mr.Navin Kumar Dy.Manager,NPCL, Greater Noida				
		:- Mr.Vipin Kumar A.E(T&C), UPPTCL				
		:- Mr.Parush Ram SDO(Trans.),UPPTCL				

Checked by :  Prem Shekhar Chhetri	Approved by :  ENGINEER BKS BASANT KUMAR DANUJI	
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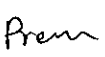
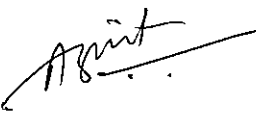
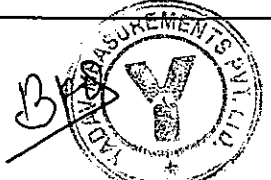
 Yadav Measurements	<h2>CERTIFICATE OF CALIBRATION</h2>	 
	Issued by : YADAV MEASUREMENTS PRIVATE LIMITED Plot no. F-373-375 RIICO Bhamashah Industrial Area, Kaladwas ,Udaipur-Rajasthan-313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.Measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate No.: **YMPL/333101/122969** **ULR-CC27352100000453F** Page 2 of 4

8 Description of reference standards used :-			
Reference standard	Calibration valid up to	Traceability	Parameters
3 Phase Reference Standard EI No. : 2359 Sr.No. : ID12204 Model : MT3000	19-Nov-2021	IDEMI, Mumbai & NPL, New Delhi Via YMPL	Active Energy, Reactive Energy
9 Calibration Procedure: CP-ETCH-S-2.1			
Before starting calibration, both standard and E.U.C. (Equipment Under Calibration) were warmed-up for half an hour. For calibration of E.U.C voltage and current was taken from electronic source and fed to E.U.C. and reference standard for measurement of energy. The metrological pulse output was used for calibration of energy measurement. The pulse output of E.U.C. was fed to the input of reference standard. The errors reported were directly calculated and displayed by above reference standard. At least 3 measurements were made for each calibration point and an average of these was reported in the results.			
10 Electro Technical Calibration:			
Results: - The calibration results are given below.			

A. 3 phase 4 wire balance mode Import Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	0.01	0.30	0.047	2.00
			0.8 Cap	-0.05	0.30	0.044	2.00
		1	UPF	0.00	0.20	0.038	2.00
			0.5 Ind	-0.01	0.30	0.049	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.5	UPF	-0.01	0.20	0.036	2.00
			0.5 Ind	0.04	0.30	0.047	2.00
			0.8 Cap	-0.02	0.30	0.045	2.00
		0.1	UPF	0.00	0.20	0.036	2.00
			0.5 Ind	0.05	0.30	0.047	2.00
			0.8 Cap	-0.01	0.30	0.044	2.00
		0.05	UPF	0.03	0.20	0.050	2.00
		0.02	0.5 Ind	0.18	0.50	0.098	2.00
			0.8 Cap	0.02	0.50	0.061	2.00
		0.01	UPF	0.02	0.40	0.082	2.00

Checked by : 	Approved by : 	
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Yadav Measurements

CERTIFICATE OF CALIBRATION

Issued by :
YADAV MEASUREMENTS PRIVATE LIMITED
 Plot no. F-373-375 RIICO Bhamashah Industrial Area,
 Kaladwas ,Udaipur-Rajasthan-313003, INDIA
 Tel: 0091-294-2650127,28, Fax: 0091-294-2650129
 Email: Yadav.Measurements@ymllabs.com
 website: www.yadavmeasurements.com
 CIN number: U31909RJ2003PTC018450



Certificate No.: **YMPL/333101/122969** **ULR-CC273521000000453F** Page 3 of 4

B. 3 phase 4 wire balance mode Import Reactive energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Sin ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.04	0.30	0.052	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		1	1	-0.01	0.20	0.036	2.00
			0.5 Ind	-0.03	0.30	0.052	2.00
			0.8 Cap	-0.04	0.30	0.059	2.00
		0.5	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.053	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		0.1	1	-0.04	0.20	0.036	2.00
			0.5 Ind	-0.06	0.30	0.053	2.00
			0.8 Cap	-0.01	0.30	0.059	2.00
		0.05	1	0.01	0.20	0.053	2.00
		0.02	0.5 Ind	0.02	0.50	0.091	2.00
			0.8 Cap	-0.04	0.50	0.059	2.00
		0.01	1	0.00	0.40	0.074	2.00

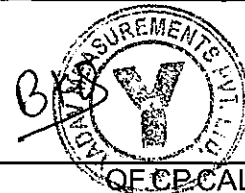
C. 3 phase 4 wire balance mode Export Active energy measurement :-

EUC Range	Applied Voltage	Applied Current (A)	Cos ϕ	% Error	\pm Allowed Limits (%)	\pm Expanded Uncertainty (%)	Coverage Factor (k)
63.5Vp-n 1-2A 50Hz	63.5Vp-n	2	UPF	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.01	0.30	0.047	2.00
			0.8 Cap	-0.03	0.30	0.045	2.00
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			0.8 Cap	-0.04	0.30	0.044	2.00
		0.05	UPF	0.06	0.20	0.050	2.00
		0.02	0.5 Ind	0.06	0.50	0.098	2.00
			0.8 Cap	0.04	0.50	0.061	2.00
		0.01	UPF	0.01	0.40	0.082	2.00




Checked by :

Prem

Approved by :



QF.CP.CALB.4B.01.00

 Yadav Measurements	CERTIFICATE OF CALIBRATION	  CC-2735
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Certificate No.: **YMPL/333101/122969** **ULR-CC27352100000453F** Page 4 of 4


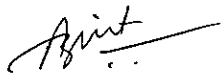
D. 3 phase 4 wire balance mode Export Reactive energy measurement :-

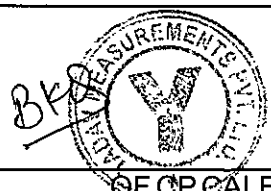
EUC Range	Applied Voltage	Applied Current (A)	Sin φ	% Error	± Allowed Limits (%)	± Expanded Uncertainty (%)	Coverage Factor (k)
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		1	1	-0.03	0.20	0.037	2.00
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		0.1	1	-0.02	0.20	0.036	2.00
			0.5 Ind	-0.02	0.30	0.052	2.00
			0.8 Cap	-0.03	0.30	0.060	2.00
		0.05	1	0.02	0.20	0.053	2.00
		0.02	0.5 Ind	0.01	0.50	0.091	2.00
			0.8 Cap	0.03	0.50	0.059	2.00
		0.01	1	0.02	0.40	0.074	2.00

11. REMARKS :-

- For k=2.00
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2.00, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with NABL requirements.
- For k≠2.00
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- This certificate is specific for E.U.C. for environmental and other conditions mentioned in this certificate.
- The reported uncertainty applies only to the measured values and gives no indication of the long term stability of device.
- Calibration points and due date mentioned as per customer's requirement.
- Any anomaly/discrepancy in this calibration certificate should be brought to our notice within 45 days from the date of issue
- The meter error is found within Limit specified in clause no. 11.1 of IS 14697:1999 (Re-affirmed) with latest amendment.
- Authenticity of this Certificate can be verified by sending details of certificate to Yadav.Measurements@ymllabs.com
- This certificate is issued in accordance with the laboratory accreditation requirements of the NABL (Govt.of India). It provides traceability of measurement to the SI system of units and / or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.
- The results reported related only to the equipment calibrated.
- Description of the equipment under calibration which is mentioned in this calibration certificate is taken from the name plate of EUC and / or customer.
- The treatment of measurement uncertainty (MU) for decision on conformity /nonconformity against agreed specification/limits of standard is based on either:
 - as specified in standard being followed , if it is inherent in the standard / specification of test/calibration
 - when consideration of MU is not inherent in standard / specification of the test / calibration and;
If result is out of limit, the decision is reported as non-conform or If result is equal to or less than limit decision is reported as conform.

TL.CP.CALB.1B.01.03

Checked by : 	Approved by : 
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TL.CP.CALB.4B.01.00

Feeder Details Report

Noida Power Company Limited

Feeder/NPoint Grid	Fdr/NPoint Descript.	Superior Grid ID	Superior Grid ID Des	Grid ValidityFrom Dt	Grid ValidityTo Dt.	Meter No.	Meter_ValidityFrom D	Meter_ValidityTo Dt.
FHDEL1F012	JP ASSOCIATES	SNDEL1	DELTA-1 SUBSTATION	03.07.2019	31.12.9999	NOPB0115	03.07.2019	31.12.9999
FHDEL3F002	SUBSTATION TRAN...	SNDEL3	DELTA-3 SWITCHING CUM SUBSTAT...	13.08.2021	31.12.9999	XG440086	13.08.2021	31.12.9999
FHDEL3F004	AVJ HEIGHTS	SNDEL3	DELTA-3 SWITCHING CUM SUBSTAT...	13.08.2021	31.12.9999	XG440084	02.09.2021	31.12.9999
FHDEL3F006	DELTA-3 O-POCKET	SNDEL3	DELTA-3 SWITCHING CUM SUBSTAT...	07.10.2021	31.12.9999	XG440081	07.10.2021	31.12.9999
FHDELTF002	AUTHORITY PUMP	SNDELT	DELTA-2 SUBSTATION	01.01.2005	31.12.9999	NOPC7970	12.03.2019	31.12.9999
FHDELTF006	DELTA-1	SNDELT	DELTA-2 SUBSTATION	01.01.2005	31.12.9999	NOPC7916	22.06.2017	31.12.9999
FHDELTF008	DELTA-2	SNDELT	DELTA-2 SUBSTATION	01.01.2005	31.12.9999	NOPC7915	22.06.2017	31.12.9999
FHDELTF010	DELTA-3	SNDELT	DELTA-2 SUBSTATION	01.01.2005	31.12.9999	SHM00043	08.03.2020	31.12.9999
FHDELTF012	GAMMA-2 H POCKET	SNDELT	DELTA-2 SUBSTATION	01.01.2005	31.12.9999	NOPC7917	22.06.2017	31.12.9999
FHDELTF018	KP-4	SNDELT	DELTA-2 SUBSTATION	01.01.2005	31.12.9999	NOPC7919	22.06.2017	31.12.9999
FHDMASF002	DM AWAS	SNDMAS	DM AWAS SUBSTATION	01.07.2012	31.12.9999	SHM00076	04.07.2021	31.12.9999
FHDMASF006	NTPC	SNDMAS	DM AWAS SUBSTATION	01.07.2012	31.12.9999	SHM00078	04.07.2021	31.12.9999
FHDMASF010	ITBP	SNDMAS	DM AWAS SUBSTATION	01.11.2012	31.12.9999	SHM00079	04.07.2021	31.12.9999
FHDMASF012	REFERRAL HOSPITAL	SNDMAS	DM AWAS SUBSTATION	07.09.2016	31.12.9999	SHM00077	04.07.2021	31.12.9999
FHDMASF014	CRPF GROUP CENTRE	SNDMAS	DM AWAS SUBSTATION	17.06.2019	31.12.9999	SHM00056	04.07.2021	31.12.9999
FHDMICF002	SUBSTATION TRAN...	SNDMIC	DMIC SWITCHING CUM SUBSTATION	18.03.2021	31.12.9999	SHM00052	19.03.2021	31.12.9999
FHDMICF004	DMIC STREET LIGH...	SNDMIC	DMIC SWITCHING CUM SUBSTATION	30.09.2021	31.12.9999	X1208919	30.09.2021	31.12.9999
FHDMICF006	DMIC STREET LIGH...	SNDMIC	DMIC SWITCHING CUM SUBSTATION	30.09.2021	31.12.9999	X1208940	30.09.2021	31.12.9999
FHDMICF008	DMIC PUMP-1	SNDMIC	DMIC SWITCHING CUM SUBSTATION	20.10.2021	31.12.9999	X1208914	20.10.2021	31.12.9999
FHEC15F002	SUBSTATION TRAN...	SNEC15	ECOTECH-15 SUBSTATION	19.02.2016	31.12.9999	NOPL9621	04.08.2016	31.12.9999
FHEC15F006	ROTO PUMP	SNEC15	ECOTECH-15 SUBSTATION	27.07.2016	31.12.9999	NOPL9040	02.01.2018	31.12.9999

Variables for Ad Hoc Report

 Business Partner	=	<input type="text"/>	<input type="checkbox"/>	Include	▼	Insert Row
 Billing Portion	=	<input type="text"/>	<input type="checkbox"/>	Include	▼	Insert Row
 Posting Cal Month (*)		<input type="text" value="12022"/>	<input type="checkbox"/>			12022
 Parent Acc Class(Auth)	=	<input type="text"/>	<input type="checkbox"/>	Include	▼	Insert Row

Execute Check

BEx Ad Hoc Analysis

Data Analysis Graphical Display Info Information Broadcasting

Monthly Invoice Report From 01.01.2022 To 31.01.2022

Last Data Update: 14.07.2022 04:31:45

Save View Bookmark Variable Screen Exceptions and Conditions Notes Export to Microsoft Excel Export to CSV

Rows

- Account Class
- Billing Document
- Billing Period From Date
- Billing Period To Date
- Billing Portion
- Business Partner
- Contract Account
- Contract Number
- Created on
- Division
- Full Name
- House Number
- Invoice Doc. Number
- Operand
- Parent Account Class
- Posting date
- Rate Category BP Mas
- Reconciliation Key
- Reversed Flag
- Street
- c/o

Columns

- Key Figures
- Free Characteristics
- Rate Category

Parent Account Class	Invoice Doc. Number	Business Partner	Contract Account	Contract Number	Full Name	c/o	House Number	Street
HV-1	120000213901	2000026723	26721	1045301	DISTRICT MAGISTRATE	DISTRICT GAUTAM BUDH NAGAR		SURAJPUR
	802000022273	2000012038	12036	1057680	KENDRIYA VIDYALAYA		HS-18	POCKET P3
	802000022274	2000023397	23395	1042911	PREETI	RINKU SHARMA		GULISTANPUR
	802000022281	2000025604	25602	1044182	SATISH KASANA & HAR	HARISH KASANA	B-001	ALPHA-1 ALPHU
	802000022283	2000026617	26615	1045195	SHORABH GUPTA		R-001	SECTOR-20 RE
	802000022284	2000026631	26629	1045209	J S HOSTEL (P) LTD.		001/A3	KNOWLEDGE P
	802000022291	2000026664	26662	1045242	HIM VALLEY NATURAL P	(HERITAGE CLUB)	R-004	SECTOR-20 CIT
	802000022292	2000026686	26684	1045264	BASUNDHRA PROPERTIES	PARSVNATH BIBHAV PLAZA	C-002	ALPHA-1 ALPHU
	802000022293	2000026726	26724	1045304	RAMA-EESH CHARITABLE		P-003	KNOWLEDGE P
	802000022294	2000026727	26725	1045305	LOTT CAREY BAPTIST MI	SOMERVILLE SCHOOL	H-BLOCK	ALPHA-2
	802000022296	2000026746	26744	1045324	INTERNATIONAL MARITI		P-013	KNOWLEDGE P
	802000022297	2000026747	26745	1045325	NIRMALA SADAN SOCIET		A-001	SECTOR-36
	802000022298	2000026748	26746	1045326	APEEJAY INSTITUTE OF		P-001	KNOWLEDGE P
	802000022299	2000026749	26747	1045327	DELHI PUBLIC SCHOOL		GH-002	GAMA-2
	802000022300	2000026754	26752	1045332	HARLAL INSTITUTE OF	ANIL BANSAL	008	KNOWLEDGE P
	802000022301	2000026761	26759	1045339	SATILILA CHARITABLE	SH. SHEWAK LILARAM VASWANI	003	KNOWLEDGE P
	802000022302	2000026762	26760	1045340	KIRPAL SINGH BAKSHI	C/O BAKSON HOMOEOPATHIC MEDICAL COLLEGE	0368	KNOWLEDGE P
	802000022303	2000026763	26761	1045341	ARMY INSTITUTE OF MA	Administrative Officer	M-001 /PO	BUILDERS SCH
	802000022304	2000026766	26764	1045344	APEEJAY EDUCATION SO	Mr. Pradeep Kumar	P-001	KNOWLEDGE P
	802000022305	2000026769	26767	1064504	VOCATIONAL EDUCATION		004	KNOWLEDGE P
	802000022315	2000026948	26946	1045526	PUNIT MEHTA	SEC-031	036	SITE 4 KASNA II
	802000022323	2000027045	27043	1045623	LLYOD INSTITUTE OF M		011	KNOWLEDGE P
	802000022324	2000027050	27048	1045626	ISHAN EDUCATIONAL RE		001A/1	KNOWLEDGE P
	802000022340	2000027146	27144	1062300	ELCO INFOTECH PVT. L		002B/3	UDYOG KENDR
	802000022350	2000034404	38007	1064563	FEDERATION OF HOTEL		045	KNOWLEDGE P

Row 1 / 115869

Slrion	Billing Document	Account Class	Rate Category	BP Mas	Created on	Posting date	Reconciliation Key	Reversed Flag	Operand	Installed Load	Voltage	AC Charges	Capacitor Surcharge	Billable Demand Charges	Demand Charges	Energy Charges	Energy C
	100013284152	HV14	HV14		24.01.2022	31.01.2022	220124R4/NIT	Not assigned	KVA	166.670	11.000.000	0.00 INR	0.00 INR	0.00 INR	48.411.93 INR	154.955.40 INR	
	100013278899	HV14	HV14		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	60.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	17.427.95 INR	65.641.95 INR	
	100013278900	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	112.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	36.812.71 INR	69.846.84 INR	
	100013278909	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	167.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	54.890.38 INR	65.459.10 INR	
	100013278911	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	139.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	45.687.21 INR	54.984.98 INR	
	100013278935	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	160.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	55.679.23 INR	121.991.94 INR	
	100013278942	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	223.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	73.296.74 INR	129.801.77 INR	
	100013278943	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	188.890	11.000.000	0.00 INR	0.00 INR	0.00 INR	62.085.30 INR	255.180.03 INR	
	100013278944	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	150.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	49.302.74 INR	137.459.70 INR	
	100013278945	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	139.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	45.687.21 INR	105.131.04 INR	
	100013278947	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	100.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	32.868.49 INR	99.244.18 INR	
	100013278948	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	89.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	29.252.96 INR	56.273.49 INR	
	100013278949	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	83.330	11.000.000	0.00 INR	0.00 INR	0.00 INR	27.389.32 INR	92.880.52 INR	
	100013278950	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	445.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	146.264.79 INR	83.331.22 INR	
	100013278951	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	112.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	36.812.71 INR	116.972.73 INR	
	100013278952	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	278.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	91.374.41 INR	295.353.24 INR	
	100013278953	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	167.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	66.744.95 INR	327.260.92 INR	
	100013278954	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	266.670	11.000.000	0.00 INR	0.00 INR	0.00 INR	87.650.41 INR	199.656.24 INR	
	100013278955	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	83.330	11.000.000	0.00 INR	0.00 INR	0.00 INR	27.389.32 INR	108.508.17 INR	
	100013278956	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	340.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	111.752.88 INR	0.00 INR	
	100013278966	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	75.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	24.651.37 INR	28.241.43 INR	
	100013278974	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	278.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	91.374.41 INR	206.036.04 INR	
	100013278975	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	74.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	24.322.68 INR	22.890.21 INR	
	100013278929	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	250.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	74.219.18 INR	138.517.52 INR	
	100013278986	HV12	HV12		24.01.2022	31.01.2022	22024R040006	Not assigned	KVA	150.000	11.000.000	0.00 INR	0.00 INR	0.00 INR	49.302.74 INR	58.910.04 INR	

Column 1 / 31

General Information	
1	Name of the DISCOM Noida Power Company Limited
2	i) Year of Establishment 01-06-1992
	ii) Government/Public/Private Private
3	DISCOM's Contact details & Address
i	City/Town/Village Noida Power Company Limited, Electric Sub Station, Knowledge Park-IV, Greater Noida
ii	District Gautam Buddha Nagar
iii	State Uttar Pradesh
iv	Telephone 91-120-6226601/02
	Fax NA
4	Registered Office
i	Company's Chief Executive Name Mr. P.R. Kumar
ii	Designation Joint Managing Director & Dy. Chief Executive Officer
iii	Address Noida Power Company Limited, Electric Sub Station, Knowledge Park-IV
iv	City/Town/Village Greater Noida
	P.O. 201310
v	District Gautam Buddha Nagar
vi	State Uttar Pradesh
	Pin 201310
vii	Telephone 91-120-6226601/02
	Fax NA
5	Nodal Officer Details*
i	Nodal Officer Name (Designated at DISCOM's) Mr Sanjiv Kumar Goel
ii	Designation DGM-Corporate and Regulatory Affairs
iii	Address Noida Power Company Limited, Electric Sub Station, Knowledge Park-IV
iv	City/Town/Village Greater Noida
	P.O. 201310
v	District Gautam Buddha Nagar
vi	State Uttar Pradesh
	Pin 201310
vii	Telephone 9999448102
	Fax NA
6	Energy Manager Details*
i	Name Mr. Krishna Chandra Kumar
ii	Designation Energy Manager (Sr.)
	Whether EA or EM EM
iii	EA/EM Registration No. EA-32965
iv	Telephone NA
	Fax NA
v	Mobile 91-7835045065
	E-mail ID kckumar@noidapower.com
7	Period of Information
	Year of (FY) information including Date and Month (Start & End) 1st Apr 2021 to 31st March 2022



Performance Summary of Electricity Distribution Companies		1st Apr 2021 to 31st March 2022
1	Period of Information Year of (FY) information including Date and Month (Start & End)	
2	Technical Details	
(a)	Energy Input Details	
(i)	Input Energy Purchase (From Generation Source)	Million kwh 2714.71
(ii)	Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh 2540.05
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh 2338.04
(b)	Transmission and Distribution (T&D) loss Details	Million kwh 202.01 %
	Collection Efficiency	% 100.34%
(c)	Aggregate Technical & Commercial Loss	% 7.64%

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

Sanjiv Kumar Goel

Signature:-

Mr. Krishna Chandra Kumar

Name of Energy Manager*:

Mr. Krishna Chandra Kumar

Registration Number:

EA-32965

Mr Sanjiv Kumar Goel

Noida Power Company Limited

Noida Power Company Limited, Electric Sub Station, Knowledge Park-IV, Greater Noida, 201310, Uttar Pradesh

Name of Authorised Signatory

Name of the DISCOM:

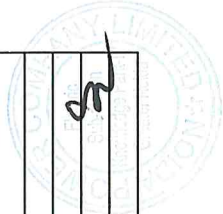
Full Address:-



Seal

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	1	1	1	
ii	Number of divisions	NA	NA	NA	
iii	Number of sub-divisions	NA	NA	NA	
iv	Number of feeders	307	307	55	It Include Both 33KV Import Feeder and 11KV Feeders
v	Number of DTs	6028	6028	240	Internal Data Base
vi	Number of consumers	117753	117753	1150	SAP ERP & Internal Data Base
2	Parameters	66kV and above	33kV	11/22kV	LT
a. i.	Number of conventional metered consumers	0	232	1	96573
ii	Number of consumers with 'smart' meters	0	0	0	4044
iii	Number of consumers with 'smart prepaid' meters	0	0	0	3828
iv	Number of consumers with 'AMR' meters	0	0	1234	2137
v	Number of consumers with 'non-smart prepaid' meters	0	0	0	7214
vi	Number of unmetered consumers	0	0	0	2490
vii	Number of total consumers	0	232	1235	116286
b.i.	Number of conventionally metered Distribution Transformers			191	
ii	Number of DTs with communicable meters			182	
iii	Number of unmetered DTs			5655	
iv	Number of total Transformers	0	0	6028	0
c.i.	Number of metered feeders	0	0	0	0
ii	Number of feeders with communicable meters	0	36	271	0
iii	Number of unmetered feeders	0	0	0	0
iv	Number of total feeders	0	36	271	0
d.	Line length (ct km)	0	1104	2711	3419
e.	Length of Aerial Bunched Cables	0	0	125	589
f.	Length of Underground Cables	0	778	894	1892



3	Voltage level	Particulars	MU	Reference	Remarks (Source of data)
i	66kV and above	Long-Term Conventional		Includes input energy for franchisees	
		Medium Conventional			
		Short Term Conventional			
		Banking			
		Long-Term Renewable energy			
		Medium and Short-Term RE		Includes power from bilateral/ PX/ DEEP	
		Captive, open access input		Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisee.	
		Sale of surplus power			
		Quantum of inter-state transmission loss		As confirmed by SLDC, RLDC etc	
		Power procured from inter-state sources	0	Based on data from Form 5	
		Power at state transmission boundary	0		
		Long-Term Conventional	1,157		SAP ERP & Internal Data Base
		Medium Conventional			
Short Term Conventional	654		SAP ERP & Internal Data Base		
Banking					
ii	33kV	Long-Term Renewable energy	88		SAP ERP & Internal Data Base
		Medium and Short-Term RE	588		SAP ERP & Internal Data Base
		Captive, open access input	43		SAP ERP & Internal Data Base
		Sale of surplus power			
		Quantum of intra-state transmission loss	0		SAP ERP & Internal Data Base
		Power procured from intra-state sources	2,531		SAP ERP & Internal Data Base

iii		Input in DISCOM wires network	2,531		SAP ERP & Internal Data Base
iv	33 kV	Renewable Energy Procurement	7		SAP ERP & Internal Data Base
		Small capacity conventional/ biomass/ hydro plants Procurement			
		Captive, open access input			
v	11 kV	Renewable Energy Procurement	3		SAP ERP & Internal Data Base
		Small capacity conventional/ biomass/ hydro plants Procurement			
		Sales Migration Input			
vi	LT	Renewable Energy Procurement	1		SAP ERP & Internal Data Base
		Sales Migration Input			
vii		Energy Embedded within DISCOM wires network	11		
viii		Total Energy Available/ Input	2,542		
4	Voltage level	Energy Sales Particulars	MU	Reference	
		DISCOM' consumers	505	Include sales to consumers in franchisee areas, unmetered consumers	SAP ERP & Internal Data Base
		Demand from open access, captive		Non DISCOM's sales	
i	LT Level	Embedded generation used at LT level		Demand from embedded generation at LT level	
		Sale at LT level	505		
		Quantum of LT level losses	-505		
		Energy Input at LT level			SAP ERP & Internal Data Base

ii	11 kV Level	DISCOM' consumers	703	Include sales to consumers in franchisee areas, unmetered consumers	SAP ERP & Internal Data Base	
		Demand from open access, captive		Non DISCOM's sales		
		Embedded generation at 11 kV level used		Demand from embedded generation at 11kV level		
		Sales at 11 kV level	703			
		Quantum of Losses at 11 kV	681			
	33 kV Level	Energy input at 11 kV level	1,383		Include the Losses of LT	
		DISCOM' consumers	1,130	Include sales to consumers in franchisee areas, unmetered consumers	Input of LT level is combined in the 11 kV level	
		Demand from open access, captive		Non DISCOM's sales	SAP ERP & Internal Data Base	
		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	1,130			
iii	> 33 kV	Quantum of Losses at 33 kV	27		SAP ERP & Internal Data Base	
		Energy input at 33kV Level	1,157		SAP ERP & Internal Data Base	
		DISCOM' consumers		Include sales to consumers in franchisee areas, unmetered consumers	SAP ERP & Internal Data Base	
		Demand from open access, captive		Non DISCOM's sales		
		Cross border sale of energy				
	iv	> 33 kV	Sale to other DISCOMs			
			Banking			
			Energy input at > 33kV Level			
			Sales at 66kV and above (EHV)	0		
			Total Energy Requirement	2,540		
		Total Energy Sales	2,338			

82

Energy Accounting Summary					
5	DISCOM	Input (in MU)	Sale (in MU)	Loss (in MU)	Loss %
i	LT				
ii	11 Kv	1,383	1,208	175	12.67%
iii	33 kv	1,157	1,130	27	2.31%
iv	> 33 kv				
6	Open Access, Captive	Input (in MU)	Sale (in MU)	Loss (in MU)	
i	LT				
ii	11 Kv				
iii	33 kv	2	2	0	0.00%
iv	> 33 kv				

Loss Estimation for DISCOM	
T&D loss	202
D loss	202
T&D loss (%)	7.95%
D loss (%)	7.95%



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

S.No	Circle code	Name of Division	Consumer profile				Energy parameters				Losses		Commercial Parameter			AT & C loss (%)				
			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 energy	Total energy		% of energy consumption	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore
1	NPCL		Residential	104316	2074	106390	99%	504.95	5.18	510.13	41%	686.31	8.17	694.48	30%	202.01	7.95%	487.72	489.54	100.37%
			Agricultural	769	0	769	7%	124.65	1.90	126.55	10%	153.96	5.67	159.06	2%			172.11	173.06	102.23%
			Commercial/Industrial-LT	1123	0	1123	1%	568.52	0.00	568.52	45%	1366.73	0.00	1366.73	58%			1272.46	1276.43	99.92%
			Commercial/Industrial-HT	1123	0	1123	1%	568.52	0.00	568.52	45%	1366.73	0.00	1366.73	58%			1272.46	1276.43	99.92%
			Others	1510	0	1510	1%	42.57	0.00	42.57	3%	108.23	0.00	108.23	5%			126.42	132.05	104.45%
Sub-total			112283	2490	114773	100%	1243.15	7.08	1250.23	100%	2324.20	13.84	2338.04	100%	202.01	7.95%	2017.60	2024.39	100.34%	
76	Total	Residential	104316	2074	106390	90%	504.95	5.18	510.13	41%	686.31	8.17	694.48	30%			487.72	489.54	100.37%	
		Agricultural	769	0	769	7%	124.65	1.90	126.55	10%	153.96	5.67	159.06	2%			172.11	173.06	102.23%	
		Commercial/Industrial-LT	1123	0	1123	7%	568.52	0.00	568.52	45%	1366.73	0.00	1366.73	58%			1272.46	1276.43	99.92%	
77	AT company level	Sub-total	112283	2490	114773	100%	1243.15	7.08	1250.23	100%	2324.20	13.84	2338.04	100%	202.01	7.95%	2017.60	2024.39	100.34%	
		Others	1510	0	1510	1%	42.57	0.00	42.57	3%	108.23	0.00	108.23	5%			126.42	132.05	104.45%	

* Note - It shall be mandatory to record the energy supplied separately for each category of consumers which is being provided a separate rate of subsidy in the tariff, by the state government, so that the subsidy due for the electricity distribution company is quarterly calculated by multiplying the energy supplied to each of such category of consumers by the applicable rate of subsidy notified by the state government.

Color code	Parameter
0	Please enter name of circle
0	Please enter circle code
0	Please enter numeric value or O
0	Formula protected

GOESK.

Mr. Sanjiv Kumar Goel

Noida Power Company Limited
Electric Sub Station, Knowledge Park-IV Greater Noida, 201310, Uttar Pradesh



Name of the DISCOM:
Full Address:

Seal

Signature:-
Name of Energy Manager:
Registration Number:

Mr. Krishna Chandra Kumar
EK-23265

Signature:-
Name of Energy Manager:
Registration Number:

Mr. Krishna Chandra Kumar
EK-23265

Details of Input Energy Sources
 Period from Apr 21, In March'22

S.No.	Name of Generation Station	General Capacity (In MW)	Type of Station (Generation Based- Solid /Coal, Liquid/Gas/Renewable /Liquid/Liquid/Gas/Renewable /Coal, Biomass, Inwaste/Other)	Type of Contract (In 30 months/other)	Type of Grid (Inter-Sub-Station/Intra-State/Inter-State)	Voltage Level (kV)	Ratio of Connection (PCC) / Loss	Voltage Level (kV) Input	Remarks (Source of Data)
1	Dharwad Infrastructure Ltd	170	Coal	25 years	Inter-State	87.71	33kV	PP bills and Internal Data Base	
2	Adani Solar Energy Private Limited	25	Renewable (Solar)	25 years	Inter-State	0.76	33kV	PP bills and Internal Data Base	
3	Adani Solar Energy Private Limited	25	Renewable (Solar)	25 years	Inter-State	0.76	33kV	PP bills and Internal Data Base	
4	Adani Solar Energy Private Limited	25	Renewable (Solar)	25 years	Inter-State	0.76	33kV	PP bills and Internal Data Base	
5	APPCPL (D&P)	50	Renewable (Hydro)	3 years	Inter-State	13.30	33kV	PP bills and Internal Data Base	
6	APPCPL (D&P)	25	Renewable (Hydro)	3 years	Inter-State	6.89	33kV	PP bills and Internal Data Base	
7	APPCPL (D&P)	25	Renewable (Hydro)	3 years	Inter-State	2.17	33kV	PP bills and Internal Data Base	
8	APPCPL (D&P)	10	Renewable (Hydro)	3 years	Inter-State	0.45	33kV	PP bills and Internal Data Base	
9	APPCPL (Ren Non Solar Source-D&P, Goa)	12	Renewable Power Non-Solar	6 months	Inter-State	0.43	33kV	PP bills and Internal Data Base	
10	APPCPL (Ren Non Solar Source-D&P, Goa)	12	Renewable Power Non-Solar	6 months	Inter-State	0.43	33kV	PP bills and Internal Data Base	
11	APPCPL (Ren Non Solar Source-M&PDC, Meghalaya)	15	Renewable Power Non-Solar	6 months	Inter-State	1.85	33kV	PP bills and Internal Data Base	
12	KREATE (Ren Non Solar Source-M&PDC, Meghalaya)	15	Renewable Power Non-Solar	6 months	Inter-State	1.05	33kV	PP bills and Internal Data Base	
13	APPCPL (Ren Non Solar Source-M&PDC, Meghalaya)	15	Renewable Power Non-Solar	6 months	Inter-State	2.27	33kV	PP bills and Internal Data Base	
14	PTCL (Source-24)	1000	Coal	2 months	Inter-State	2.27	33kV	PP bills and Internal Data Base	
15	PTCL (Source-APPCPL)	660	Coal	2 months	Inter-State	0.45	33kV	PP bills and Internal Data Base	
16	PTCL (Source-Singri-Bhanwar (HEP))	99	Renewable (Hydro)	1 month	Inter-State	0.15	33kV	PP bills and Internal Data Base	
17	PTCL (Source-J.P. Chhatraspathi)	1000	Coal	2 months	Inter-State	1.20	33kV	PP bills and Internal Data Base	
18	APPCPL (Source-S&R-G&P)	660	Coal	4 months	Inter-State	1.75	33kV	PP bills and Internal Data Base	
19	UC Power Distribution and Billing Agent					42.81		PP bills and Internal Data Base	

S.No	Name of Generation Station	Generation Capacity (In MW)	Type of Station (Generation Based- Solid/Liquid/Gas/Renewable/Other)	Type of Contract	Type of Grid	Voltage Level (kV)	Circle Load (MW)	Received at Circle (kVA)	Received at Sub-Division Level (MW)	Received at Sub-Division Level (In MU)	Received at Sub-Division Level (kVA)	Received at Sub-Division Level (In MU)	Received at Sub-Division Level (kVA)	Received at Sub-Division Level (In MU)	Remarks (Source of Data)
1	Net Metered Consumer	24.1	Renewable	In-house Net-Metered generation	Renewable Source	33kV/11kV/IT	24.1	24.1	NA	NA	NA	NA	NA	Internal Data Base and PPC	
2	Solar Power (GADA)	1.0	Renewable	Long Term	Renewable Source	11kV	1.0	1.0	NA	NA	NA	NA	NA	Internal Data Base and PPC	
3	Solar Power (APPCPL)	0.4	Renewable	Long Term	Renewable Source	LT	0.4	0.4	NA	NA	NA	NA	NA	Internal Data Base and PPC	



(Details of Consumers)

Summary of Energy

Period From Apr'21 To Mar'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	LT	upto 440	106184	282	SAP-ERP Internal data Base
2	Commercial	LT	upto 440	3628	40	SAP-ERP Internal data Base
3	IP Sets	LT	upto 440	1059	15	SAP-ERP Internal data Base
4	Hor. & Nur. & Coffee/Tea & Rubber (Metered)					
5	Hor. & Nur. & Coffee/Tea & Rubber (Flat)					
6	Heating and Motive Power					
7	Water Supply	LT	upto 440	236	14	SAP-ERP Internal data Base
8	Public Lighting	LT	upto 440	405	30	SAP-ERP Internal data Base
9	HT Water Supply	HT	11 kV	24	11	SAP-ERP Internal data Base
10	HT Industrial	HT	33 kV	116	675	SAP-ERP Internal data Base
11	Industrial (Small)	LT	upto 440	3508	103	SAP-ERP Internal data Base
12	Industrial (Medium)	HT	11 kV	768	473	SAP-ERP Internal data Base
13	HT Commercial	HT	11 kV	214	80	SAP-ERP Internal data Base
14	Applicable to Government Hospitals & Hospitals					
15	Lift Irrigation Schemes/Lift Irrigation Societies					
16	HT Res. Apartments Applicable to all areas	HT	11 kV	124	95	SAP-ERP Internal data Base
17	Mixed Load	LT	upto 440	748	10	SAP-ERP Internal data Base
18	Government offices and department					
19	HT Commercial	HT	33 kV	32	138	SAP-ERP Internal data Base
20	HT Water Supply	HT	33 kV	1	0	SAP-ERP Internal data Base
21	HT Res. Apartment	HT	33 kV	82	317	SAP-ERP Internal data Base
22	Public Lighting	HT	11 kV	7	7	SAP-ERP Internal data Base
23	Institutions	LT	upto 440	518	11	SAP-ERP Internal data Base
24	Institutions	HT	11 kV	8	1	SAP-ERP Internal data Base
25	IP Sets	HT	11 kV	2	0	SAP-ERP Internal data Base
26	Mixed Load	HT	11 kV	88	36	SAP-ERP Internal data Base
27	Mixed Load	HT	33 kV	1	0	SAP-ERP Internal data Base
			Total	117753	2338.04	

(Details of Feeder-wise losses)

Period From Apr'21 To Mar'22

Sl No.	Zone	Received at Circle (In MU)	Received at Division (In MU)	Received at Sub-division (In MU)	Name of the Station	Feeder Code/ID	Feeder Name	Type of Feeder (Urban/Mixed/Rural/Agricultural)	Type of meter (AM/AMR/Other)	Received at Feeder (Final In MU)	Feeder Consumption (In MU)	Final Net Export at Feeder Level (In MU)	T&D losses	AT&C losses	% Data Received Automatically (If Feeder AMR/AM)	Remarks
1	NPCL	NPCL	NA	NA	ECOTECH2	Anmol Bakers	ANMOL BAKERS	INDUSTRIAL	AMR	19.57					AMR	SAP-ERP and Internal data base
2	NPCL	NPCL	NA	NA	ECOTECH6	SUPER SEAL	SUPER SEAL	Industrial	AMR	12.13					AMR	SAP-ERP and Internal data base
3	NPCL	NPCL	NA	NA	TECH-02	SECTOR-1	SECTOR-1	Urban	AMR	10.15					AMR	SAP-ERP and Internal data base
4	NPCL	NPCL	NA	NA	UDYOG KENDRA	Unikom	Unikom	MIXED	AMR	15.77					AMR	SAP-ERP and Internal data base
5	NPCL	NPCL	NA	NA	UDYOG KENDRA	Rahul	Rahul	MIXED	AMR	17.61					AMR	SAP-ERP and Internal data base
6	NPCL	NPCL	NA	NA	Jalpara	BISRAKH BLOCK	BISRAKH BLOCK	Rural	AMR	11.38					AMR	SAP-ERP and Internal data base
7	NPCL	NPCL	NA	NA	Delta-3	AVJ HEIGHTS	AVJ HEIGHTS	11KV URBAN	AMR	2.62					AMR	SAP-ERP and Internal data base
8	NPCL	NPCL	NA	NA	DM AWAS	Referal Hospital	Referal Hospital	11KV URBAN	AMR	0.89					AMR	SAP-ERP and Internal data base
9	NPCL	NPCL	NA	NA	DELTA-2	DELTA-3	DELTA-3	11KV URBAN	AMR	2.96					AMR	SAP-ERP and Internal data base
10	NPCL	NPCL	NA	NA	ECOTECH-2	NALGARHA	NALGARHA	RURAL	AMR	2.75					AMR	SAP-ERP and Internal data base
11	NPCL	NPCL	NA	NA	NPCL	EXPRESSWAY	EXPRESSWAY	11KV RURAL	AMR	2.45					AMR	SAP-ERP and Internal data base
12	NPCL	NPCL	NA	NA	DM AWAS	CRPF Group centre	CRPF Group centre	URBAN	AMR	2.66					AMR	SAP-ERP and Internal data base
13	NPCL	NPCL	NA	NA	UDYOG KENDRA	Toy City	Toy City	MIXED	AMR	11.43					AMR	SAP-ERP and Internal data base
14	NPCL	NPCL	NA	NA	NPCL	IEC COLLEGE	IEC COLLEGE	11KV INSTITUTIONAL	AMR	2.23					AMR	SAP-ERP and Internal data base
15	NPCL	NPCL	NA	NA	SITE B	Site-C	Site-C	INDUSTRIAL	AMR	15.95					AMR	SAP-ERP and Internal data base
16	NPCL	NPCL	NA	NA	SECTOR-36	Sector-31	Sector-31	Industrial	AMR	8.20					AMR	SAP-ERP and Internal data base
17	NPCL	NPCL	NA	NA	SECTOR-37	Sec-33 S/S-3	Sec-33 S/S-3	Urban	AMR	8.72					AMR	SAP-ERP and Internal data base
18	NPCL	NPCL	NA	NA	SIGMA-4	Holitech India	Holitech India	INDUSTRIAL	AMR	15.62					AMR	SAP-ERP and Internal data base
19	NPCL	NPCL	NA	NA	SURAJPUR GIS	ABD POCKET	ABD POCKET	RURAL	AMR	6.90					AMR	SAP-ERP and Internal data base
20	NPCL	NPCL	NA	NA	SECTOR-36	JBM AUTO	JBM AUTO	INDUSTRIAL	AMR	14.72					AMR	SAP-ERP and Internal data base
21	NPCL	NPCL	NA	NA	UDYOG KENDRA	Innotech	Innotech	INDUSTRIAL	AMR	7.23					AMR	SAP-ERP and Internal data base
22	NPCL	NPCL	NA	NA	LUKSAR JAIL	Luksar	Luksar	Rural	AMR	10.76					AMR	SAP-ERP and Internal data base
23	NPCL	NPCL	NA	NA	SITE B	Shyam Pipe	Shyam Pipe	INDUSTRIAL	AMR	10.81					AMR	SAP-ERP and Internal data base
24	NPCL	NPCL	NA	NA	XU-3/S/5	DIVINE ELECTRONICS	DIVINE ELECTRONICS	INDUSTRIAL	AMR	15.18					AMR	SAP-ERP and Internal data base
25	NPCL	NPCL	NA	NA	ECOTECH EXT-1	Mirza International	Mirza International	Industrial	AMR	5.09					AMR	SAP-ERP and Internal data base
26	NPCL	NPCL	NA	NA	P-3	P-3 C Pocket	P-3 C Pocket	Urban	AMR	4.25					AMR	SAP-ERP and Internal data base
27	NPCL	NPCL	NA	NA	Alpha-1	ALPHA-2	ALPHA-2	11KV URBAN	AMR	11.92					AMR	SAP-ERP and Internal data base
28	NPCL	NPCL	NA	NA	TECHONE-4	AIMS GOLF TOWN	AIMS GOLF TOWN	Urban	AMR	13.87					AMR	SAP-ERP and Internal data base
29	NPCL	NPCL	NA	NA	DM AWAS	ITBP	ITBP	URBAN	AMR	6.34					AMR	SAP-ERP and Internal data base
30	NPCL	NPCL	NA	NA	NPCL	KP-2	KP-2	11KV INSTITUTIONAL	AMR	3.43					AMR	SAP-ERP and Internal data base
31	NPCL	NPCL	NA	NA	SECTOR-36	CENTRAL WAREHOUSE	CENTRAL WAREHOUSE	INDUSTRIAL	AMR	2.80					AMR	SAP-ERP and Internal data base
32	NPCL	NPCL	NA	NA	RESIDENTIAL SWI	SITE C E&E Block	SITE C E&E Block	INDUSTRIAL	AMR	0.72					AMR	SAP-ERP and Internal data base
33	NPCL	NPCL	NA	NA	RESIDENTIAL SWI	Meenakshi	Meenakshi	INDUSTRIAL	AMR	0.77					AMR	SAP-ERP and Internal data base
34	NPCL	NPCL	NA	NA	SECTOR-36	SECTOR-36	SECTOR-36	INDUSTRIAL	AMR	3.67					AMR	SAP-ERP and Internal data base
35	NPCL	NPCL	NA	NA	SITE B	SITE-C H Block	SITE-C H Block	INDUSTRIAL	AMR	16.76					AMR	SAP-ERP and Internal data base
36	NPCL	NPCL	NA	NA	Builder Area	Senior Citizen	Senior Citizen	Urban	AMR	4.75					AMR	SAP-ERP and Internal data base
37	NPCL	NPCL	NA	NA	DELTA-1	ALPHA-2 I POCKET	ALPHA-2 I POCKET	11KV MIXED	AMR	0.33					AMR	SAP-ERP and Internal data base
38	NPCL	NPCL	NA	NA	SIGMA-4	Sigma-4	Sigma-4	Urban	AMR	3.12					AMR	SAP-ERP and Internal data base
39	NPCL	NPCL	NA	NA	DELTA-2	GAMMA-2 H POCKET	GAMMA-2 H POCKET	11KV URBAN	AMR	8.30					AMR	SAP-ERP and Internal data base
40	NPCL	NPCL	NA	NA	GIRDHARPUR	Bilaspur Town	Bilaspur Town	Rural	AMR	8.19					AMR	SAP-ERP and Internal data base
41	NPCL	NPCL	NA	NA	BETA-2	BETA-2 I POCKET	BETA-2 I POCKET	11KV URBAN	AMR	9.93					AMR	SAP-ERP and Internal data base
42	NPCL	NPCL	NA	NA	ZETA-1	KP-4 SUBSTATION-1	KP-4 SUBSTATION-1	11KV URBAN	AMR	0.00					AMR	SAP-ERP and Internal data base
43	NPCL	NPCL	NA	NA	ESS 6	NATIONAL DATA CENTR	NATIONAL DATA CENTR	INSTITUTIONAL	AMR	0.95					AMR	SAP-ERP and Internal data base
44	NPCL	NPCL	NA	NA	ESS 2	DELHI PUBLIC SCHOOL	DELHI PUBLIC SCHOOL	INSTITUTIONAL	AMR	0.54					AMR	SAP-ERP and Internal data base
45	NPCL	NPCL	NA	NA	P-3	P-3 B Pocket	P-3 B Pocket	Urban	AMR	1.40					AMR	SAP-ERP and Internal data base
46	NPCL	NPCL	NA	NA	Omicron-3	Ultimo	Ultimo	Urban	AMR	1.56					AMR	SAP-ERP and Internal data base
47	NPCL	NPCL	NA	NA	CONTAINER	STAR TRACK	STAR TRACK	INDUSTRIAL	AMR	3.88					AMR	SAP-ERP and Internal data base
48	NPCL	NPCL	NA	NA	Omicron-3	AKRITI PRINTERS	AKRITI PRINTERS	Urban	AMR	4.03					AMR	SAP-ERP and Internal data base
49	NPCL	NPCL	NA	NA	Ecotech-15	SECTOR-3 POCKET C &	SECTOR-3 POCKET C &	INDUSTRIAL	AMR	3.94					AMR	SAP-ERP and Internal data base
50	NPCL	NPCL	NA	NA	SECTOR-03	TUGALPUR MARKET	TUGALPUR MARKET	11KV URBAN	AMR	3.03					AMR	SAP-ERP and Internal data base
51	NPCL	NPCL	NA	NA	KP-1	DEVVA	DEVVA	RURAL	AMR	6.33					AMR	SAP-ERP and Internal data base
52	NPCL	NPCL	NA	NA	SITE B	Dabra	Dabra	Rural	AMR	0.38					AMR	SAP-ERP and Internal data base
53	NPCL	NPCL	NA	NA	XU-3/S/5	SITE-4 (HP)	SITE-4 (HP)	INDUSTRIAL	AMR	4.19					AMR	SAP-ERP and Internal data base
54	NPCL	NPCL	NA	NA	SWARN NAGRI	JAGAT FARM	JAGAT FARM	11KV MIXED	AMR	7.27					AMR	SAP-ERP and Internal data base
55	NPCL	NPCL	NA	NA	ECOTECH EXT-1	Khanpur	Khanpur	Rural	AMR	5.89					AMR	SAP-ERP and Internal data base
56	NPCL	NPCL	NA	NA	JALPURA	TATA MOTOR	TATA MOTOR	MIXED	AMR	6.03					AMR	SAP-ERP and Internal data base
57	NPCL	NPCL	NA	NA	HATEWA	Nawada	Nawada	Rural	AMR	5.47					AMR	SAP-ERP and Internal data base
58	NPCL	NPCL	NA	NA	ESS 10	KP-5	KP-5	INSTITUTIONAL	AMR	2.39					AMR	SAP-ERP and Internal data base
59	NPCL	NPCL	NA	NA	NPCL	ZETA-1	ZETA-1	11KV URBAN	AMR	2.76					AMR	SAP-ERP and Internal data base
60	NPCL	NPCL	NA	NA	SECTOR-03	INNOX	INNOX	INDUSTRIAL	AMR	4.69					AMR	SAP-ERP and Internal data base
61	NPCL	NPCL	NA	NA	SURAJPUR GIS	GHORI BACHERA	GHORI BACHERA	RURAL	AMR	6.37					AMR	SAP-ERP and Internal data base
62	NPCL	NPCL	NA	NA	XU 1	BHAGAT SINGH	BHAGAT SINGH	RURAL	AMR	7.19					AMR	SAP-ERP and Internal data base
63	NPCL	NPCL	NA	NA	SURAJPUR GIS	AMNABAD	AMNABAD	Rural	AMR	3.61					AMR	SAP-ERP and Internal data base
64	NPCL	NPCL	NA	NA	Jalpara	DOOB AREA	DOOB AREA	RURAL	AMR	6.48					AMR	SAP-ERP and Internal data base
65	NPCL	NPCL	NA	NA	LAKHNAWALI	SAVITRI BAI PHULE	SAVITRI BAI PHULE	INDUSTRIAL	AMR	8.77					AMR	SAP-ERP and Internal data base
66	NPCL	NPCL	NA	NA	SECTOR-36	Kamarsi	Kamarsi	Rural	AMR	5.96					AMR	SAP-ERP and Internal data base
67	NPCL	NPCL	NA	NA	HATEWA	KASNA 6% ABADI	KASNA 6% ABADI	urban	AMR	2.03					AMR	SAP-ERP and Internal data base
68	NPCL	NPCL	NA	NA	ECOTECH-6	GAMMA-1 F POCKET	GAMMA-1 F POCKET	11KV URBAN	AMR	3.37					AMR	SAP-ERP and Internal data base
69	NPCL	NPCL	NA	NA	GAMMA-1	NOIDA University	NOIDA University	Urban	AMR	4.47					AMR	SAP-ERP and Internal data base
70	NPCL	NPCL	NA	NA	IT CITY	TIWOLI	TIWOLI	11KV MIXED	AMR	1.92					AMR	SAP-ERP and Internal data base
71	NPCL	NPCL	NA	NA	DELTA-1	TUBEWELL	TUBEWELL	RURAL	AMR	0.77					AMR	SAP-ERP and Internal data base
72	NPCL	NPCL	NA	NA	ECOTECH-2	DTL	DTL	INDUSTRIAL	AMR	21.00					AMR	SAP-ERP and Internal data base
73	NPCL	NPCL	NA	NA	SITE B	Chuharpur Khadar	Chuharpur Khadar	Rural	AMR	2.03					AMR	SAP-ERP and Internal data base
74	NPCL	NPCL	NA	NA	CHI-4	Chuharpur Khadar	Chuharpur Khadar	Rural	AMR	2.03					AMR	SAP-ERP and Internal data base



(Details of Feeder-wise losses)

Period From: Apr'21 To Mar'22

Sl No.	Zone	Received at Circle (in MU)	Received at Division (in MU)	Received at Sub-division (in MU)	Name of the Station	Feeder Code/ID	Feeder Name	Type of Feeder (Urban/Mixed/Industrial/Agricultural/Rural)	Type of meter (AMI/AMR/Other)	Received at Feeder (in MU)	Feeder Consumption (in MU)	Final Net Export at Feeder Level (in MU)	T&D losses	AT&C losses	% Data Received through Autometricity (if Feeder AMR/AMI)	Remarks
77	NPCL	NPCL	NA	NA	LUKSAR JAIL	ATEN FOODS	ATEN FOODS	Industrial	AMR	22.34					AMR	SAP-ERP and Internal data base
78	NPCL	NPCL	NA	NA	JALPURA	JALPURA	JALPURA	RURAL	AMR	10.78					AMR	SAP-ERP and Internal data base
79	NPCL	NPCL	NA	NA	SECTOR-2 OVERHEAD	SECTOR-2 OVERHEAD	SECTOR-2 OVERHEAD	Urban	AMR	5.36					AMR	SAP-ERP and Internal data base
80	NPCL	NPCL	NA	NA	HATEWA	Daleigarh	Daleigarh	Rural	AMR	5.40					AMR	SAP-ERP and Internal data base
81	NPCL	NPCL	NA	NA	UDYOG KENDRA	Baalk Inter College	Baalk Inter College	Urban	AMR	2.84					AMR	SAP-ERP and Internal data base
82	NPCL	NPCL	NA	NA	KP-3	SUNSHINE (KP-3)	SUNSHINE (KP-3)	11KV URBAN	AMR	2.64					AMR	SAP-ERP and Internal data base
83	NPCL	NPCL	NA	NA	ESS-02	AINARA SPORTS CITY	AINARA SPORTS CITY	Urban	AMR	0.39					AMR	SAP-ERP and Internal data base
84	NPCL	NPCL	NA	NA	ESS-02	Sector-03	Sector-03	Urban	AMR	1.05					AMR	SAP-ERP and Internal data base
85	NPCL	NPCL	NA	NA	SUURAIPUR GIS	LOTUS PARK	LOTUS PARK	URBAN	AMR	0.52					AMR	SAP-ERP and Internal data base
86	NPCL	NPCL	NA	NA	IT CITY	GHARBABA VILLAGE	GHARBABA VILLAGE	URBAN	AMR	10.61					AMR	SAP-ERP and Internal data base
87	NPCL	NPCL	NA	NA	Ecotech-15	K U INFOTECH	K U INFOTECH	Rural	AMR	3.33					AMR	SAP-ERP and Internal data base
88	NPCL	NPCL	NA	NA	Ecotech-15	6% ROZA YAKUBPUR	6% ROZA YAKUBPUR	Urban	AMR	0.14					AMR	SAP-ERP and Internal data base
89	NPCL	NPCL	NA	NA	Ecotech-15	HALDUANI	HALDUANI	URBAN	AMR	0.21					AMR	SAP-ERP and Internal data base
90	NPCL	NPCL	NA	NA	NPCL	BETA-1	BETA-1	11KV URBAN	AMR	10.30					AMR	SAP-ERP and Internal data base
91	NPCL	NPCL	NA	NA	ECOTECH EXT-1	Sunshine	Sunshine	Industrial	AMR	9.72					AMR	SAP-ERP and Internal data base
92	NPCL	NPCL	NA	NA	ECOTECH-6	AMAZON SERVICES	AMAZON SERVICES	Industrial	AMR	9.84					AMR	SAP-ERP and Internal data base
93	NPCL	NPCL	NA	NA	Techzone-4	ITHERA 6% ABADI	ITHERA 6% ABADI	Urban	AMR	10.50					AMR	SAP-ERP and Internal data base
94	NPCL	NPCL	NA	NA	KP-1	KAILASH HOSPITAL	KAILASH HOSPITAL	11KV INSTITUTIONAL	AMR	0.04					AMR	SAP-ERP and Internal data base
95	NPCL	NPCL	NA	NA	Builder Area	SECTOR-2 PKT A	SECTOR-2 PKT A	Urban	AMR	3.72					AMR	SAP-ERP and Internal data base
96	NPCL	NPCL	NA	NA	Builder Area	SECTOR-2 PKT B	SECTOR-2 PKT B	Urban	AMR	3.60					AMR	SAP-ERP and Internal data base
97	NPCL	NPCL	NA	NA	UDYOG KENDRA	Sunrise Auto	Sunrise Auto	INDUSTRIAL	AMR	0.57					AMR	SAP-ERP and Internal data base
98	NPCL	NPCL	NA	NA	SECTOR-02	SECTOR-2 PKT C&D	SECTOR-2 PKT C&D	Urban	AMR	11.24					AMR	SAP-ERP and Internal data base
99	NPCL	NPCL	NA	NA	SECTOR-02	Bhagwati	Bhagwati	INDUSTRIAL	AMR	0.24					AMR	SAP-ERP and Internal data base
100	NPCL	NPCL	NA	NA	SECTOR-02	SECTOR-2 PKT E&F S/S	SECTOR-2 PKT E&F S/S	Urban	AMR	7.40					AMR	SAP-ERP and Internal data base
101	NPCL	NPCL	NA	NA	SECTOR-02	SECTOR-2 PKT B	SECTOR-2 PKT B	Urban	AMR	0.79					AMR	SAP-ERP and Internal data base
102	NPCL	NPCL	NA	NA	SECTOR-03	SECTOR-3 B-POCKET	SECTOR-3 B-POCKET	Urban	AMR	0.62					AMR	SAP-ERP and Internal data base
103	NPCL	NPCL	NA	NA	SECTOR-03	TECHZONE-7	TECHZONE-7	Urban	AMR	0.80					AMR	SAP-ERP and Internal data base
104	NPCL	NPCL	NA	NA	SECTOR-03	Swarnagati S/s No-2	Swarnagati S/s No-2	Urban	AMR	1.08					AMR	SAP-ERP and Internal data base
105	NPCL	NPCL	NA	NA	CH-4	Chi-4	Chi-4	Urban	AMR	3.77					AMR	SAP-ERP and Internal data base
106	NPCL	NPCL	NA	NA	ALPHA-1	HOUSING SOCIETY	HOUSING SOCIETY	11KV URBAN	AMR	8.54					AMR	SAP-ERP and Internal data base
107	NPCL	NPCL	NA	NA	ALPHA-1	GRIHDARPUR	GRIHDARPUR	Rural	AMR	3.10					AMR	SAP-ERP and Internal data base
108	NPCL	NPCL	NA	NA	ESS-06	SECTOR-20	SECTOR-20	Urban	AMR	0.70					AMR	SAP-ERP and Internal data base
109	NPCL	NPCL	NA	NA	ECOTECH2	Sawney sons	Sawney sons	INDUSTRIAL	AMR	9.37					AMR	SAP-ERP and Internal data base
110	NPCL	NPCL	NA	NA	DELTA-2	DELTA-2	DELTA-2	11KV URBAN	AMR	5.77					AMR	SAP-ERP and Internal data base
111	NPCL	NPCL	NA	NA	Omiron-3	GHORI AND JUMPAT 6%	GHORI AND JUMPAT 6%	Urban	AMR	0.04					AMR	SAP-ERP and Internal data base
112	NPCL	NPCL	NA	NA	HATEWA	JHALDA	JHALDA	Rural	AMR	3.53					AMR	SAP-ERP and Internal data base
113	NPCL	NPCL	NA	NA	ECOTECH2	Bajaj	Bajaj	INDUSTRIAL	AMR	8.50					AMR	SAP-ERP and Internal data base
114	NPCL	NPCL	NA	NA	ECOTECH-6	BENNETT UNIVERSITY	BENNETT UNIVERSITY	Industrial	AMR	22.03					AMR	SAP-ERP and Internal data base
115	NPCL	NPCL	NA	NA	CONTAINER	SANTOSH NAGAR	SANTOSH NAGAR	RURAL	AMR	8.48					AMR	SAP-ERP and Internal data base
116	NPCL	NPCL	NA	NA	BETA-1	BETA-2	BETA-2	11KV URBAN	AMR	0.43					AMR	SAP-ERP and Internal data base
117	NPCL	NPCL	NA	NA	LAKHNAWALI	R2P	R2P	RURAL	AMR	3.48					AMR	SAP-ERP and Internal data base
118	NPCL	NPCL	NA	NA	ALPHA-1	ALPHA-1	ALPHA-1	11KV URBAN	AMR	9.20					AMR	SAP-ERP and Internal data base
119	NPCL	NPCL	NA	NA	SECTOR-36	MADHANIYA	MADHANIYA	URBAN	AMR	0.11					AMR	SAP-ERP and Internal data base
120	NPCL	NPCL	NA	NA	CH-3	PHI-3 & PHI-4	PHI-3 & PHI-4	Urban	AMR	1.18					AMR	SAP-ERP and Internal data base
121	NPCL	NPCL	NA	NA	BUILDERS AREA	GALGOTIA	GALGOTIA	11KV INSTITUTIONAL	AMR	0.94					AMR	SAP-ERP and Internal data base
122	NPCL	NPCL	NA	NA	DELTA-1	NAVADA (URBAN)	NAVADA (URBAN)	11KV URBAN	AMR	1.07					AMR	SAP-ERP and Internal data base
123	NPCL	NPCL	NA	NA	LUKSAR JAIL	Jail Complex	Jail Complex	urban	AMR	1.25					AMR	SAP-ERP and Internal data base
124	NPCL	NPCL	NA	NA	LUKSAR JAIL	Jail Residential	Jail Residential	urban	AMR	1.64					AMR	SAP-ERP and Internal data base
125	NPCL	NPCL	NA	NA	ECOTECH-6	ECOTECH-6	ECOTECH-6	Industrial	AMR	1.50					AMR	SAP-ERP and Internal data base
126	NPCL	NPCL	NA	NA	SURAIIPUR GIS	POLICE LINE & SSP OFFICE	POLICE LINE & SSP OFFICE	URBAN	AMR	2.84					AMR	SAP-ERP and Internal data base
127	NPCL	NPCL	NA	NA	KP-3	ITS	ITS	11KV INSTITUTIONAL	AMR	4.16					AMR	SAP-ERP and Internal data base
128	NPCL	NPCL	NA	NA	Builder Area	P-2	P-2	Urban	AMR	7.31					AMR	SAP-ERP and Internal data base
129	NPCL	NPCL	NA	NA	SUNPURA	KHODNA KHURD	KHODNA KHURD	RURAL	AMR	6.17					AMR	SAP-ERP and Internal data base
130	NPCL	NPCL	NA	NA	DELTA-3	DELTA-3	DELTA-3	11KV URBAN	AMR	1.22					AMR	SAP-ERP and Internal data base
131	NPCL	NPCL	NA	NA	SITE C SWITCHING	DADRI ROAD TILAPTA	DADRI ROAD TILAPTA	RURAL	AMR	0.46					AMR	SAP-ERP and Internal data base
132	NPCL	NPCL	NA	NA	DM AWAS	ITFC	ITFC	URBAN	AMR	1.97					AMR	SAP-ERP and Internal data base
133	NPCL	NPCL	NA	NA	IT CITY	IT ANSAL	IT ANSAL	Industrial	AMR	1.37					AMR	SAP-ERP and Internal data base
134	NPCL	NPCL	NA	NA	Builder Area	U-2 Pump	U-2 Pump	Pump	AMR	1.89					AMR	SAP-ERP and Internal data base
135	NPCL	NPCL	NA	NA	Builder Area	JUNPAT	JUNPAT	RURAL	AMR	4.41					AMR	SAP-ERP and Internal data base
136	NPCL	NPCL	NA	NA	SUNPURA	SAINI	SAINI	RURAL	AMR	3.37					AMR	SAP-ERP and Internal data base
137	NPCL	NPCL	NA	NA	SUNPURA	INSPIRED SCHOOL	INSPIRED SCHOOL	URBAN	AMR	0.25					AMR	SAP-ERP and Internal data base
138	NPCL	NPCL	NA	NA	SECTOR-3	BARAHI MANDIR	BARAHI MANDIR	MIXED	AMR	4.96					AMR	SAP-ERP and Internal data base
139	NPCL	NPCL	NA	NA	SURAIIPUR GIS	BRUDA ROAD COLONY	BRUDA ROAD COLONY	RURAL	AMR	0.18					AMR	SAP-ERP and Internal data base
140	NPCL	NPCL	NA	NA	SITE C SWITCHING	SAKIBUR	SAKIBUR	RURAL	AMR	6.59					AMR	SAP-ERP and Internal data base
141	NPCL	NPCL	NA	NA	BIRONDI	Sec-32 Pi Pump	Sec-32 Pi Pump	Pump	AMR	1.58					AMR	SAP-ERP and Internal data base
142	NPCL	NPCL	NA	NA	CH-4	PHI-4	PHI-4	Urban	AMR	1.69					AMR	SAP-ERP and Internal data base
143	NPCL	NPCL	NA	NA	NPCL	ILLM NEW	ILLM NEW	11KV INSTITUTIONAL	AMR	3.14					AMR	SAP-ERP and Internal data base
144	NPCL	NPCL	NA	NA	NPCL	VALENOVA PARK	VALENOVA PARK	Urban	AMR	3.16					AMR	SAP-ERP and Internal data base
145	NPCL	NPCL	NA	NA	Techzone-4	SKYLINE	SKYLINE	11KV INSTITUTIONAL	AMR	0.52					AMR	SAP-ERP and Internal data base
146	NPCL	NPCL	NA	NA	KP-2	STREET LIGHT (KP-2)	STREET LIGHT (KP-2)	11KV MIXED	AMR	0.75					AMR	SAP-ERP and Internal data base
147	NPCL	NPCL	NA	NA	NPCL	ACCMAN	ACCMAN	11KV INSTITUTIONAL	AMR	0.12					AMR	SAP-ERP and Internal data base
148	NPCL	NPCL	NA	NA	NPCL	ACCMAN	ACCMAN	11KV INSTITUTIONAL	AMR	0.12					AMR	SAP-ERP and Internal data base
149	NPCL	NPCL	NA	NA	NPCL	ACCMAN	ACCMAN	11KV INSTITUTIONAL	AMR	0.12					AMR	SAP-ERP and Internal data base
150	NPCL	NPCL	NA	NA	NPCL	ACCMAN	ACCMAN	11KV INSTITUTIONAL	AMR	0.12					AMR	SAP-ERP and Internal data base



(Details of Feeder-wise losses)

Period From Apr'21 To Mar'22

Sl No.	Zone	Received at Circle (in MU)	Received at Division (in MU)	Received at Sub-division (in MU)	Name of the Station (in MU)	Feeder Code/ID	Feeder Name	Type of Feeder (Urban/Mixed/Rural/Agricultural)	Type of meter (AMI/AMR/Other)	Received at Feeder (Final in MU)	Feeder Consumption (in MU)	Final Net Export at Feeder Level (in MU)	T&D losses	AT&C losses	% Data Received through Feeder (AMR/AMI)	Remarks
153	NPCL	NA	NA	NA	BETA-1	TATA TISCO	TATA TISCO	11KV URBAN	AMR	2.01					AMR	SAP-ERP and Internal data base
154	NPCL	NA	NA	NA	LAKHAWALI	MALAKPUR	MALAKPUR	RURAL	AMR	6.37					AMR	SAP-ERP and Internal data base
155	NPCL	NA	NA	NA	SURAJPUR GIS	SURAJPUR MARKET	SURAJPUR MARKET	MIXED	AMR	7.09					AMR	SAP-ERP and Internal data base
156	NPCL	NA	NA	NA	ZETA-1	OASIS	OASIS	INDUSTRIAL	AMR	3.98					AMR	SAP-ERP and Internal data base
157	NPCL	NA	NA	NA	KP-3	VSK GARDEN	VSK GARDEN	11KV URBAN	AMR	0.00					AMR	SAP-ERP and Internal data base
158	NPCL	NA	NA	NA	LAKHAWALI	LAKHAWALI	LAKHAWALI	RURAL	AMR	3.17					AMR	SAP-ERP and Internal data base
159	NPCL	NA	NA	NA	ZETA-1	DLF SCHOOL	DLF SCHOOL	11KV MIXED	AMR	1.23					AMR	SAP-ERP and Internal data base
160	NPCL	NA	NA	NA	BETA-1	AMRITPURAM	AMRITPURAM	11KV URBAN	AMR	0.00					AMR	SAP-ERP and Internal data base
161	NPCL	NA	NA	NA	ESS-10	NATURE MIRACLE	NATURE MIRACLE	Industrial	AMR	5.27					AMR	SAP-ERP and Internal data base
162	NPCL	NA	NA	NA	GIRDHARPUR	ROUNI	ROUNI	Rural	AMR	4.70					AMR	SAP-ERP and Internal data base
163	NPCL	NA	NA	NA	BHONDI	KP-4 SUBSTATION-2	KP-4 SUBSTATION-2	11KV URBAN	AMR	0.00					AMR	SAP-ERP and Internal data base
164	NPCL	NA	NA	NA	ESS 10	JACKSON (New)	JACKSON (New)	INDUSTRIAL	AMR	2.71					AMR	SAP-ERP and Internal data base
165	NPCL	NA	NA	NA	ALPHA-1	HEAD OFFICE	HEAD OFFICE	11KV URBAN	AMR	4.71					AMR	SAP-ERP and Internal data base
166	NPCL	NA	NA	NA	CHI-4	Chi-4 Pump	Chi-4 Pump	Pump	AMR	1.53					AMR	SAP-ERP and Internal data base
167	NPCL	NA	NA	NA	ESS-02	Sector-10	Sector-10	Urban	AMR	4.66					AMR	SAP-ERP and Internal data base
168	NPCL	NA	NA	NA	Builder Area	P-6	P-6	Urban	AMR	4.71					AMR	SAP-ERP and Internal data base
169	NPCL	NA	NA	NA	ESS-02	Kherpur Gujjar	Kherpur Gujjar	Rural	AMR	4.54					AMR	SAP-ERP and Internal data base
170	NPCL	NA	NA	NA	ECOTECH EXT-1	Kasna Market	Kasna Market	Rural	AMR	12.67					AMR	SAP-ERP and Internal data base
171	NPCL	NA	NA	NA	ECOTECH EXT-1	Rohan Motors	Rohan Motors	INDUSTRIAL	AMR	6.16					AMR	SAP-ERP and Internal data base
172	NPCL	NA	NA	NA	SIGMA-4	Sigma-2 S/S-5	Sigma-2 S/S-5	Mixed	AMR	0.77					AMR	SAP-ERP and Internal data base
173	NPCL	NA	NA	NA	Sector-37	Parasdeep	Parasdeep	Urban	AMR	5.06					AMR	SAP-ERP and Internal data base
174	NPCL	NA	NA	NA	Builder Area	P-3	P-3	Urban	AMR	0.73					AMR	SAP-ERP and Internal data base
175	NPCL	NA	NA	NA	DELTA-1	DELTA-1 A POCKET	DELTA-1 A POCKET	11KV URBAN	AMR	5.83					AMR	SAP-ERP and Internal data base
176	NPCL	NA	NA	NA	SITE C RESIDENTIAL SWIT	Aareal Housing	Aareal Housing	URBAN	AMR	3.93					AMR	SAP-ERP and Internal data base
177	NPCL	NA	NA	NA	CHI-3	Chi-4 S/S-2	Chi-4 S/S-2	Urban	AMR	0.00					AMR	SAP-ERP and Internal data base
178	NPCL	NA	NA	NA	CHI-3	Chi-5	Chi-5	Urban	AMR	0.00					AMR	SAP-ERP and Internal data base
179	NPCL	NA	NA	NA	SITE C RESIDENTIAL SWIT	Hindustan	Hindustan	INDUSTRIAL	AMR	4.96					AMR	SAP-ERP and Internal data base
180	NPCL	NA	NA	NA	CHI-4	Solar Plant Incomer	Solar Plant Incomer	Urban	AMR	0.00					AMR	SAP-ERP and Internal data base
181	NPCL	NA	NA	NA	SITE C	GULISTANPUR	GULISTANPUR	RURAL	AMR	2.21					AMR	SAP-ERP and Internal data base
182	NPCL	NA	NA	NA	GAMMA-1	C.M MARKET	C.M MARKET	11KV MIXED	AMR	1.32					AMR	SAP-ERP and Internal data base
183	NPCL	NA	NA	NA	SUNPURA	VEDPURA	VEDPURA	RURAL	AMR	9.30					AMR	SAP-ERP and Internal data base
184	NPCL	NA	NA	NA	XU-1	Xu-1	Xu-1	Urban	AMR	2.14					AMR	SAP-ERP and Internal data base
185	NPCL	NA	NA	NA	SUNPURA	SHEODAPUR	SHEODAPUR	RURAL	AMR	5.88					AMR	SAP-ERP and Internal data base
186	NPCL	NA	NA	NA	DELTA-2	KP-4	KP-4	11KV URBAN	AMR	0.09					AMR	SAP-ERP and Internal data base
187	NPCL	NA	NA	NA	Sector-37	Swarnagari	Swarnagari	Urban	AMR	2.28					AMR	SAP-ERP and Internal data base
188	NPCL	NA	NA	NA	Sector-37	Sec-36 S/S-4	Sec-36 S/S-4	Urban	AMR	0.65					AMR	SAP-ERP and Internal data base
189	NPCL	NA	NA	NA	CHI-3	Chi-3 & Society	Chi-3 & Society	Urban	AMR	4.09					AMR	SAP-ERP and Internal data base
190	NPCL	NA	NA	NA	Sector-37	Aichar	Aichar	Rural	AMR	4.67					AMR	SAP-ERP and Internal data base
191	NPCL	NA	NA	NA	P-3	JAL VAVU VIHAR	JAL VAVU VIHAR	Urban	AMR	4.66					AMR	SAP-ERP and Internal data base
192	NPCL	NA	NA	NA	Sector-37	Sigma-1,2,3	Sigma-1,2,3	Urban	AMR	1.17					AMR	SAP-ERP and Internal data base
193	NPCL	NA	NA	NA	CONTAINER	TILAPTA CANAL	TILAPTA CANAL	RURAL	AMR	4.87					AMR	SAP-ERP and Internal data base
194	NPCL	NA	NA	NA	KP-2	ILIM OLD	ILIM OLD	11KV INSTITUTIONAL	AMR	2.90					AMR	SAP-ERP and Internal data base
195	NPCL	NA	NA	NA	KP-3	ILMT COLLEGE	ILMT COLLEGE	Urban	AMR	3.20					AMR	SAP-ERP and Internal data base
196	NPCL	NA	NA	NA	SIGMA-4	Supertech Czar	Supertech Czar	Urban	AMR	5.97					AMR	SAP-ERP and Internal data base
197	NPCL	NA	NA	NA	Omicron-3	MU-2	MU-2	Urban	AMR	2.04					AMR	SAP-ERP and Internal data base
198	NPCL	NA	NA	NA	Sector-37	Sec-36 S/S-3	Sec-36 S/S-3	Urban	AMR	0.24					AMR	SAP-ERP and Internal data base
199	NPCL	NA	NA	NA	KP-3	FHRAI	FHRAI	11KV INSTITUTIONAL	AMR	0.83					AMR	SAP-ERP and Internal data base
200	NPCL	NA	NA	NA	Delta-3	Delta-3 O Pkt	Delta-3 O Pkt	11KV URBAN	AMR	0.79					AMR	SAP-ERP and Internal data base
201	NPCL	NA	NA	NA	DVI AWAS	DVI Awas	DVI Awas	URBAN	AMR	1.88					AMR	SAP-ERP and Internal data base
202	NPCL	NA	NA	NA	Sector-37	Mathurapur	Mathurapur	Rural	AMR	2.10					AMR	SAP-ERP and Internal data base
203	NPCL	NA	NA	NA	SIGMA-4	Sigma-3	Sigma-3	Urban	AMR	0.68					AMR	SAP-ERP and Internal data base
204	NPCL	NA	NA	NA	ECOTECH EXT-1	Dadha	Dadha	Rural	AMR	3.19					AMR	SAP-ERP and Internal data base
205	NPCL	NA	NA	NA	XU-1	Mu-1	Mu-1	Urban	AMR	2.54					AMR	SAP-ERP and Internal data base
206	NPCL	NA	NA	NA	SIGMA-4	Rithori	Rithori	Rural	AMR	9.42					AMR	SAP-ERP and Internal data base
207	NPCL	NA	NA	NA	SITE B	Mu-2 EWS(NEW)	Mu-2 EWS(NEW)	Urban	AMR	0.10					AMR	SAP-ERP and Internal data base
208	NPCL	NA	NA	NA	SIGMA-4	Fena	Fena	INDUSTRIAL	AMR	4.36					AMR	SAP-ERP and Internal data base
209	NPCL	NA	NA	NA	DELTA-1	Sigma-2 S/S-4	Sigma-2 S/S-4	Urban	AMR	0.93					AMR	SAP-ERP and Internal data base
210	NPCL	NA	NA	NA	Sector-16	JP ASSOCIATES	JP ASSOCIATES	11KV URBAN	AMR	0.34					AMR	SAP-ERP and Internal data base
211	NPCL	NA	NA	NA	Sector-16	SKA GREEN ARCH	SKA GREEN ARCH	Urban	AMR	3.25					AMR	SAP-ERP and Internal data base
212	NPCL	NA	NA	NA	SWARN NAGRI	Swarnnagari Pump	Swarnnagari Pump	Pump	AMR	0.62					AMR	SAP-ERP and Internal data base
213	NPCL	NA	NA	NA	KHI RAM	Kashi Ram	Kashi Ram	Rural	AMR	0.38					AMR	SAP-ERP and Internal data base
214	NPCL	NA	NA	NA	GAMMA-1	GAMMA PUMP	GAMMA PUMP	11KV PUMP	AMR	2.20					AMR	SAP-ERP and Internal data base
215	NPCL	NA	NA	NA	Sector-37	Sec-37	Sec-37	Urban	AMR	2.46					AMR	SAP-ERP and Internal data base
216	NPCL	NA	NA	NA	XU-1	XU Pump	XU Pump	Pump	AMR	1.81					AMR	SAP-ERP and Internal data base
217	NPCL	NA	NA	NA	ETA	ETA	ETA	11KV URBAN	AMR	3.55					AMR	SAP-ERP and Internal data base
218	NPCL	NA	NA	NA	SURAJPUR GIS	DM OFFICE	DM OFFICE	URBAN	AMR	1.21					AMR	SAP-ERP and Internal data base
219	NPCL	NA	NA	NA	XU-3	Xu-3 A&B Pkt	Xu-3 A&B Pkt	Urban	AMR	0.40					AMR	SAP-ERP and Internal data base
220	NPCL	NA	NA	NA	IT CITY	Murshadpur	Murshadpur	Rural	AMR	2.00					AMR	SAP-ERP and Internal data base
221	NPCL	NA	NA	NA	CHI-4	Momthalal	Momthalal	Rural	AMR	0.79					AMR	SAP-ERP and Internal data base
222	NPCL	NA	NA	NA	EPF S/5	SAHARA EXPORT	SAHARA EXPORT	Industrial	AMR	2.74					AMR	SAP-ERP and Internal data base
223	NPCL	NA	NA	NA	ESS 10	Toyo Ink	Toyo Ink	INDUSTRIAL	AMR	19.46					AMR	SAP-ERP and Internal data base
224	NPCL	NA	NA	NA	LAKHAWALI	KULESRA	KULESRA	RURAL	AMR	12.28					AMR	SAP-ERP and Internal data base
225	NPCL	NA	NA	NA	ZETA-1	METRO DEPOT	METRO DEPOT	11KV MIXED	AMR	4.53					AMR	SAP-ERP and Internal data base
226	NPCL	NA	NA	NA	ECOTECH EXT-1	L&T LIMITED	L&T LIMITED	Industrial	AMR	0.22					AMR	SAP-ERP and Internal data base



(Details of Feeder-wise losses)

Period From Apr'21 To Mar'22

SI No.	Zone	Received at Circle (In MU)	Received at Division (In MU)	Received at Sub-division (In MU)	Name of the Station	Feeder Code/ID	Feeder Name	Type of Feeder (Urban/Mixed/Rural/Agricultural)	Type of Feeder (AMI/AMR/Other)	Received at Feeder (Final In MU)	Feeder Consumption (In MU)	Final Net Export at Feeder Level (In MU)	T&D losses	A/T&C losses	% Data Received through Feeder (AMR/AMI)	Remarks	
228	NPCL	NA	NA	NA	EPIS/S/5	AAYAAAM	AAYAAAM	Industrial	AMR	11.87					AMR	SAP-ERP and Internal data base	
229	NPCL	NA	NA	NA	Builder Area	P-8	P-8	Urban	AMR	9.14					AMR	SAP-ERP and Internal data base	
230	NPCL	NA	NA	NA	ECOTECH-6	INDRAPASTHA	INDRAPASTHA	Industrial	AMR	21.21					AMR	SAP-ERP and Internal data base	
231	NPCL	NA	NA	NA	SITE B	SITE-B	SITE-B	Industrial	AMR	13.81					AMR	SAP-ERP and Internal data base	
232	NPCL	NA	NA	NA	SHATEWA	Bulandkhara	Rural	Rural	AMR	1.85					AMR	SAP-ERP and Internal data base	
233	NPCL	NA	NA	NA	ESS 10	Videotax	INDUSTRIAL	Industrial	AMR	19.09					AMR	SAP-ERP and Internal data base	
234	NPCL	NA	NA	NA	XP-2	Xu-2	Urban	Urban	AMR	2.33					AMR	SAP-ERP and Internal data base	
235	NPCL	NA	NA	NA	Techno-4	SARVOTIAM	SARVOTIAM	Urban	AMR	7.45					AMR	SAP-ERP and Internal data base	
236	NPCL	NA	NA	NA	Sector-02	GAUR MANSION	GAUR MANSION	Urban	AMR	12.31					AMR	SAP-ERP and Internal data base	
237	NPCL	NA	NA	NA	ECOTECH EXT-1	Vintage	Vintage	Industrial	AMR	14.03					AMR	SAP-ERP and Internal data base	
238	NPCL	NA	NA	NA	ESS10	KHERACHAUGANPUR	KHERACHAUGANPUR	RURAL	AMR	5.41					AMR	SAP-ERP and Internal data base	
239	NPCL	NA	NA	NA	EPIS/S/5	Olympic	Olympic	Industrial	AMR	0.00					AMR	SAP-ERP and Internal data base	
240	NPCL	NA	NA	NA	Ecotech-15	ROTO PUMP	ROTO PUMP	Industrial	AMR	6.47					AMR	SAP-ERP and Internal data base	
241	NPCL	NA	NA	NA	Ecotech-15	FUN ZOO TOYS	FUN ZOO TOYS	Industrial	AMR	3.05					AMR	SAP-ERP and Internal data base	
242	NPCL	NA	NA	NA	GRIDHARPUR	PANCHAYAN	PANCHAYAN	Rural	AMR	6.47					AMR	SAP-ERP and Internal data base	
243	NPCL	NA	NA	NA	SUNBURA	BHANOTA	BHANOTA	RURAL	AMR	1.32					AMR	SAP-ERP and Internal data base	
244	NPCL	NA	NA	NA	GRIDHARPUR	PATLAHERA PTW	PATLAHERA PTW	Rural	AMR	0.19					AMR	SAP-ERP and Internal data base	
245	NPCL	NA	NA	NA	DELTA-2	AUTHORITY PUMP	AUTHORITY PUMP	11KV PUMP	AMR	4.02					AMR	SAP-ERP and Internal data base	
246	NPCL	NA	NA	NA	Sector-16	Sector-16	Sector-16	Urban	AMR	6.26					AMR	SAP-ERP and Internal data base	
247	NPCL	NA	NA	NA	SIGMA-4	Omicron-1	Omicron-1	Urban	AMR	4.45					AMR	SAP-ERP and Internal data base	
248	NPCL	NA	NA	NA	SWARN NAGRI	Swarnagari S/s No-1	Swarnagari S/s No-1	Urban	AMR	1.75					AMR	SAP-ERP and Internal data base	
249	NPCL	NA	NA	NA	CHI-4	Nimbuss	Nimbuss	Urban	AMR	4.39					AMR	SAP-ERP and Internal data base	
250	NPCL	NA	NA	NA	BIRONDI	ANS Apartment	ANS Apartment	Urban	AMR	2.67					AMR	SAP-ERP and Internal data base	
251	NPCL	NA	NA	NA	ALPHA-1	COMMERCIAL BELT	COMMERCIAL BELT	11KV URBAN	AMR	4.66					AMR	SAP-ERP and Internal data base	
252	NPCL	NA	NA	NA	Builder Area	CASA GREEN	CASA GREEN	Urban	AMR	5.20					AMR	SAP-ERP and Internal data base	
253	NPCL	NA	NA	NA	Sector-16	JAITPUR	JAITPUR	11KV URBAN	AMR	2.17					AMR	SAP-ERP and Internal data base	
254	NPCL	NA	NA	NA	BIRONDI	TUSYANA	TUSYANA	RURAL	AMR	1.54					AMR	SAP-ERP and Internal data base	
255	NPCL	NA	NA	NA	ESS5	Biondi	Biondi	Rural	AMR	4.76					AMR	SAP-ERP and Internal data base	
256	NPCL	NA	NA	NA	ECOTECH EXT-1	HOLOSTIK INDIA	HOLOSTIK INDIA	Industrial	AMR	18.49					AMR	SAP-ERP and Internal data base	
257	NPCL	NA	NA	NA	XU-3	Xu-3 C PK	Xu-3 C PK	Urban	AMR	1.09					AMR	SAP-ERP and Internal data base	
258	NPCL	NA	NA	NA	XP-2	HALDONA	HALDONA	11KV MIXED	AMR	1.75					AMR	SAP-ERP and Internal data base	
259	NPCL	NA	NA	NA	GRIDHARPUR	KHERLI HAFIZPUR	KHERLI HAFIZPUR	Rural	AMR	9.35					AMR	SAP-ERP and Internal data base	
260	NPCL	NA	NA	NA	SITE B	Modern Transformer	Modern Transformer	INDUSTRIAL	AMR	9.70					AMR	SAP-ERP and Internal data base	
261	NPCL	NA	NA	NA	ECOTECH-6	D.N.V System	D.N.V System	Industrial	AMR	13.54					AMR	SAP-ERP and Internal data base	
262	NPCL	NA	NA	NA	NP-1	Customer Care Center	Customer Care Center	11KV INSTITUTIONAL	AMR	0.00					AMR	SAP-ERP and Internal data base	
263	NPCL	NA	NA	NA	Ecotech-15	SGS UDYOG	SGS UDYOG	Industrial	AMR	9.89					AMR	SAP-ERP and Internal data base	
264	NPCL	NA	NA	NA	EPIS/S/5	HABIBPUR	Bharat Udyog	Industrial	AMR	13.64					AMR	SAP-ERP and Internal data base	
265	NPCL	NA	NA	NA	JALPURA	HABIBPUR	HABIBPUR	MIXED	AMR	9.26					AMR	SAP-ERP and Internal data base	
266	NPCL	NA	NA	NA	GAMMA-1	GAMMA-1 E POCKET	GAMMA-1 E POCKET	11KV URBAN	AMR	4.47					AMR	SAP-ERP and Internal data base	
267	NPCL	NA	NA	NA	ESS 10	Mahindra Electronic	Mahindra Electronic	INDUSTRIAL	AMR	11.77					AMR	SAP-ERP and Internal data base	
268	NPCL	NA	NA	NA	ZETA	MAKODA	MAKODA	RURAL	AMR	7.02					AMR	SAP-ERP and Internal data base	
269	NPCL	NA	NA	NA	XP-3/S/5	TIMES GROUP	TIMES GROUP	Industrial	AMR	1.38					AMR	SAP-ERP and Internal data base	
270	NPCL	NA	NA	NA	KP-2	Kaladham	Kaladham	11KV INSTITUTIONAL	AMR	0.00					AMR	SAP-ERP and Internal data base	
271	NPCL	NA	NA	NA	DMIC SWITCHING CUM	DMIC STREET LIGHT 1	DMIC STREET LIGHT 1	Urban	AMR	0.03					AMR	SAP-ERP and Internal data base	
272	NPCL	NA	NA	NA	DMIC SWITCHING CUM	DMIC STREET LIGHT 2	DMIC STREET LIGHT 2	Urban	AMR	0.05					AMR	SAP-ERP and Internal data base	
273	NPCL	NA	NA	NA	DMIC SWITCHING CUM	DMIC PUMP-1	DMIC PUMP-1	Urban	AMR	0.03					AMR	SAP-ERP and Internal data base	
274	NPCL	NA	NA	NA													
275	NPCL	NA	NA	NA													

