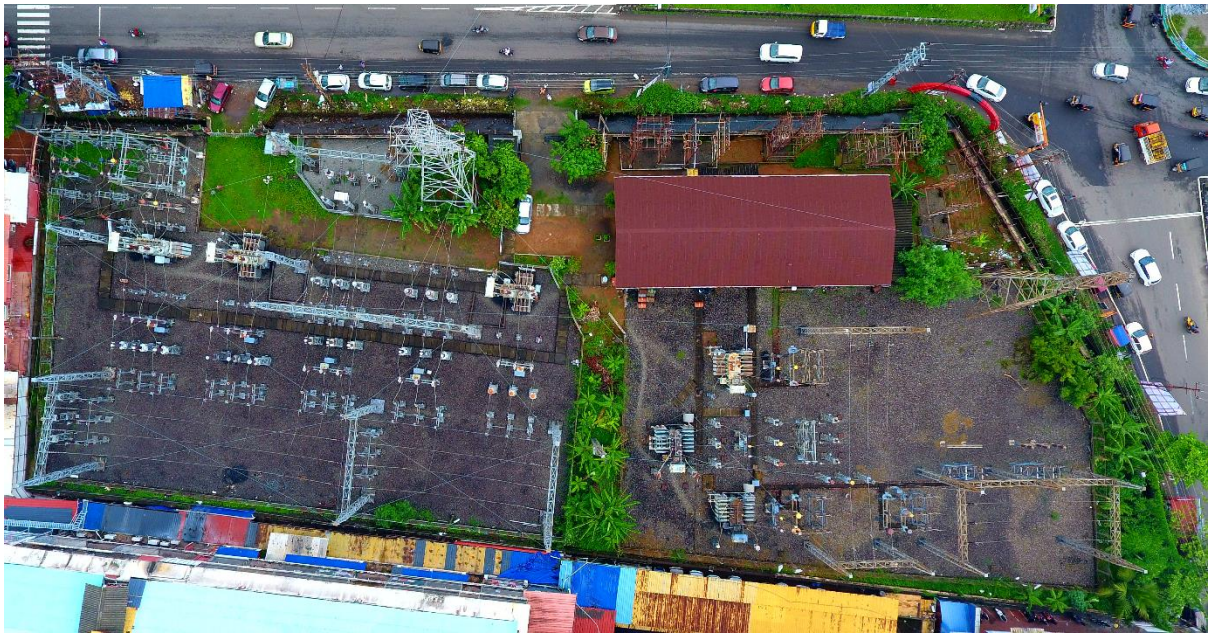
Annual Energy Audit Report

FY 2024-25



Thrissur Corporation Electricity Department (TCED)

Reg No. DIS0070KL

Thrissur, Kerala.

Prepared by

Centre for Energy Environment & Productivity
1039, 26th Street, H Block, Ponni Colony,
Anna Nagar, Chennai 600040
Ph: +91 9444882553 / 8668115663 E-Mail: ceepnagesh@gmail.com

July 2025

ACKNOWLEDGEMENTS

Bureau of Energy Efficiency (BEE) through its extraordinary gazette notification on 06th October 2021 made the regulation: Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021. Through this 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 (Energy Management Centre, Govt of Kerala) within a period of four months from the expiry of the relevant financial year.

Centre for Energy Environment and Productivity (CEEP) places on record its sincere thanks to M/s Thrissur Corporation Electricity Department (TCED) for entrusting the task of conducting Energy audit for its DISCOM during July 2025.

We would also like to thank the following officials of M/s Thrissur Corporation Electricity Department (TCED), Thrissur District-Kerala - 680001. for their proactive support and courtesy extended to the AEC team during the study and all other staff, especially the Assistant Engineers and sub staffs of each section, for their cooperation and support given during the whole process.

Mr. Jose T Simon	*Electrical Engineer*
Ms. Jayasree V S	*Finance Manager*
Mr. Nikhil B	*Assistant engineer/Energy Auditor*
Ms. Deepa S	*IT Manager*

31-07-2025

J Nagesh Kumar
Director/AEA 0133
Centre for Energy Environment & Productivity
1039, 26th Street, H Block, Ponni Colony,
Anna Nagar, Chennai 600040
tallkumar@gmail.com, ceepnagesh@gmail.com

Centre for Energy, Environment and Productivity
Plot No. 1039, 26th Street, H-Block,
Ponni Colony, Anna Nagar, Chennai - 600 040.
PH : 044 2616 3483, 9444882553

ENERGY AUDIT TEAM

Table 1: Energy audit team

Sr No	Name	Qualification	EM/EA/AEA/ Registration No	Experience (In Years)
Team Leader				
1	Mr. J Nagesh Kumar	• Accredited Energy Auditor	AEA-0133	30
Team Members				
2	Mr. Sunil Kumar V K	• Certified Energy Auditor • Sector Expert	EA - 3642	32
3	Mr. Ashok K M P	• Certified Energy Auditor • M. E. (Energy Engineering)	EA- 34760/22	12
4	Ms. Della David	• Certified Energy Auditor • M. Tech (Power electronics)	EA -34867/22	15
5	Ms. Keerthana K	• Certified Energy Manager • B. Tech (EEE)	EM – 11843/23	3
6	Ms. Neema Joy P	• Project Engineer	NIL	2

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EXECUTIVE SUMMARY

1. PERFORMANCE SUMMARY

The performance summary of TCED as DISCOM as per the FY 2024-25 is given in the following table.

TABLE 2: SUMMARY OF DISCOM – FORM-1

Performance Summary of Electricity Distribution Companies			
1	Period of Information Year of (FY) information including Date and Month (Start & End)	1st Apr, 2024 - 31st March, 2025	
2	**Technical Details**		
(a)	**Energy Input Details**		
(i)	Input Energy Purchase (From Generation Source)	Million kWh	188.189
(ii)	Net input energy (at DISCOM Periphery including sale outside periphery)	Million kWh	188.189
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded)	Million kWh	175.82
(b)	Transmission and Distribution (T & D) loss (Billing efficiency)	Million kWh	12.373
		%	6.57
(i)	Collection Efficiency	%	98.81%
(c)	Aggregate Technical & Commercial Loss	%	7.68%

2. ENERGY CONSERVATION MEASURES SUMMARY

The TCED can consider several possible measures for energy conservation to reduce their distribution loss to their best value as summarised in the executive summary.

TABLE 3: ENERGY CONSERVATION MEASURES

ECM No	Energy Efficiency Measures	Annual Electricity Savings	Annual Financial Savings	Investment	Fixed interest rate	Cash inflow	Net present value	Internal rate of return
		MU	(Rs)	(Rs)	%	Years	Rs	%
1	Replacing HT & LT overhead lines with UG cables[1]	1.538	1,02,26,693	1,75,45,800	8	5	6,91,101	10.86%
2	Power Factor Improvement in Feeders – installation of 165 kVAr total	-	75,69,736	37,50,000	8	1	32,59,015	101.86%

[1] At 11 kV = 8.273 km & at 415 V = 20.97 km

3. GENERAL OBSERVATIONS AND SUGGESTIONS

TABLE 4: GENERAL OBSERVATIONS AND SUGGESTIONS

Observation	Suggestions	Benefits
Collection efficiency of the DISCOM has been 98.81% As per the TCED availed data, the major dues are from the Government departments, urban local bodies, street light and corporation owned buildings.	Collection drives should be placed in the DISCOM area. Awareness shall be provided for the proper billing in due time. Energy cell can give awareness in the DSM and various energy efficiency measures to help them in reducing the consumption. With the Smart meter installation gets completed, the colletion efficiency can be 100%.	Collection efficiency of the DISCOM is 98.81% which resulted in AT & C loss 7.68% (FY-2024-25) As per the TCED availed data, the major dues are from the Government departments, urban local bodies, street light and corporation owned buildings.
As the back-feed units from one feeder to another were not available in the DISCOM, exact loss analysis was unable to calculate from the existing data.	Feeder boundary energy meter is suitable option to have the back-feed data and records shall be maintained properly.	As the back-feed units from one feeder to another were not available in the DISCOM, exact loss analysis was unable to calculate from the existing data.

4. COMPLIANCE TO RENEWABLE PURCHASE OBLIGATIONS

TCED purchasing the 96.97% of the power consumed through KSEBL. As the KSEBL is on the verge of meeting the RPO obligation, the same can consider for the TCED.

Table 5: Solar generation share

Total Energy Consumption FY 2024-25 (MU)	**188.19**	
Details	**Solar generation**	**Non-solar generation**
Present status - MU	5.71	0
Present status - %	3.03%	0

BACKGROUND

1. ABOUT BEE

The Government of India has set up Bureau of Energy Efficiency (BEE) on 1st March 2002 under the provision of the Energy Conservation Act, 2001. The mission of Bureau of Energy Efficiency is to assist in developing policies and strategies with a thrust on self-regulation and market principles with the primary objective of reducing energy intensity of the Indian economy within the overall framework of the Energy Conservation Act, 2001. This will be achieved with active participation of all stakeholders, resulting into accelerated and sustained adoption of energy efficiency in all sectors.

2. EXTANT OF REGULATIONS - DISCOM

Under the notification S.O. 3445 (E) dated 28 Sept 2020, all entities having distribution license are notified as Designated Consumers. Notification is read as "All entities having issued distribution license by State/Joint Electricity Regulatory Commission under the Electricity Act, 2003 (36 of 2003)" are notified as Designated Consumers (DCs). After this notification, all the DISCOMs will be governed under the various provisions of Energy Conservation Act, such as Appointment of Energy Manager, Energy Accounting & Auditing, identification of Energy Losses Category wise, Implementation of energy conservation & efficiency measures etc.

The amendment 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. The amendment is expected to improve the financial state of the DISCOMs.

In exercise of the powers conferred by clause (g) of sub-section (2) of section 58, read with clause (q) of sub-section (2) of section 13 of the Energy Conservation Act, 2001 (52 of 2001), the Bureau of Energy Efficiency, thus made the following regulations:

3 **Named as** Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021.

4 These regulations shall apply to all electricity distribution companies specified as designated consumer.

5 They shall come into force on the date of their publication in the Official Gazette. (No: CG-DL-E-08102021-230245 Dated 06 October 2021).

3. PURPOSE OF AUDIT AND ACCOUNTING REPORT

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

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

4. PERIOD OF ENERGY AUDIT AND ACCOUNTING

The table below shows the frequency of energy audit and energy accounting as per the BEE guidelines.

Table 6: Period of Energy Audit & Accounting – as per BEE guidelines

Particulars	Frequency	Submission date	Whom to submit	Who should submit
Energy audit	Every year	Within a period of 4 months from the expiry of the relevant financial year	BEE & SDA	Accredited energy auditor
Energy accounting	Quarterly	45 days from the quarter	BEE & SDA	Certified energy manager

TCED has initiated the energy audit in the month of July 2025 in order to submit the Energy audit report. Thus, the TCED entrusted the work to CEEP as per the work order no: BEE/DISCOM–44/25 dated 5th July 2025 and the latter started the field study by last week of July- field study for 18 days - and draft report submitted on 31st July 2025.

5. PROGRESS IN COMPLIANCE TO PREREQUISITES TO ENERGY ACCOUNTING

Table 7: Progress in energy accounting

Quarter	Submission date	Ref no
1st Quarter – 1st April 2024 to 30th June 2024	13-08-2024	Mail
2nd quarter – 1st July 2024 to 30th Sept 2024	13-11-2024	Mail
3rd Quarter - 1st Oct 2024 to 31st Dec 2024	11-02-2025	Mail
4th Quarter – 1st Jan 2025 to 31st Mar 2025	13-05-2025	Mail

DISCOM INTRODUCTION AND OVERVIEW

1. NAME AND ADDRESS OF DESIGNATED CONSUMER

Table 8: Name and address of designated consumer

General Details	Description
Registered Office address with telephone, fax nos. & e-mail	**M/s Thrissur Corporation Electricity Department (TCED),** Thrissur Corporation, MO Road, Thrissur District-Kerala - 680001. Ph: 0487 2422470
Company Chief executive name & details	**Assistant Secretary** **M/s Thrissur Corporation Electricity Department (TCED),** Thrissur Corporation, MO Road, Thrissur District-Kerala -680001. Ph: 0487 2422470 Email: electricitydepartment@yahoo.co.in
Authorized signatory of DC (Nodal Officer)	**Mr. Jose T S** **Electrical Engineer** **M/s Thrissur Corporation Electricity Department (TCED),** Thrissur Corporation, MO Road, Thrissur District-Kerala - 680001. Ph: 0487 2423559
Energy Manager's Name, Designation, Registration No., Address, Mobile, Telephone, Fax nos. & e-mail	**Mr. Nikhil B** Assistant Engineer/CEA 24811 **M/s Thrissur Corporation Electricity Department (TCED),** Thrissur Corporation, MO Road, Thrissur District-Kerala - 680001. Mob: 9037192013

2. ENERGY AUDIT CELL

Table 9: Energy audit cell

Sr	Member of EAC	Name	Designation	Mobile number	Email
1	Nodal officer	Mr. Jose T Simon	Electrical Engineer	9446019795	electricitydepartment@yahoo.co.in
2	Energy Auditor	Mr. Nikhil B	Assistant engineer/Energy Auditor CEA 24811	9037192013	
3	IT manager	Ms. Deepa S	System Administrator	9048267195	
4	Financial manager	Mr. Baburaj N	Senior Superintend	8921364952	

3. SUMMARY PROFILE OF DISCOM – FORM-1

The performance summary of TCED as DISCOM as per the FY 2024-25 is given in the following table.

Table 10: Summary of DISCOM – Form-1

Performance Summary of Electricity Distribution Companies			
1	Period of Information Year of (FY) information including Date and Month (Start & End)	1st Apr, 2024 - 31st March, 2025	
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(b)	Transmission and Distribution (T&D) loss (Billing efficiency)	Million kWh	12.373
		%	6.57
	Collection Efficiency	%	98.81%
(c)	Aggregate Technical & Commercial Loss	%	7.68%

The feeder wise T&D loss of the TCED distribution system is calculated based on the annual unit consumption for 18 feeders and summarized in the following table:

Table 11: T & D loss – Summarised – feeder wise

Sl. No	Feeder	Net energy sales - annual	LT OH line loss	LT Cable loss	Transformer Loss	HT OH & cable line loss	Est. Consumption at feeder level	T&D Loss - calculated	
		MU	MU	MU	MU	MU	MU	MU	%
1	Mission Quaters	10.55	1.312	0.024	0.189	0.004	12.08	1.53	12.65
2	Veleyannor	8.55	0.787	0.018	0.111	0.002	9.47	0.92	9.69
3	Koorkenchery	9.68	2.103	0.038	0.154	0.006	11.98	2.30	19.20
4	Paravattany	9.57	1.622	0.060	0.171	0.006	11.43	1.86	16.27
5	Aranatukara	12.73	2.768	0.059	0.240	0.014	15.81	3.08	19.49
6	JMC	8.80	-	-	-	0.004	8.81	0.00	0.05
7	Vivekodhayam	7.53	0.810	0.026	0.119	0.002	8.48	0.96	11.27
8	Bini	6.81	0.305	0.006	0.100	0.001	7.23	0.41	5.71
9	Poonkunam	8.82	0.002	0.011	0.177	0.002	9.01	0.19	2.12
10	Keralavarma	10.47	1.200	0.034	0.227	0.008	11.94	1.47	12.31
11	Ramanilayam	8.10	0.214	0.008	0.095	0.002	8.42	0.32	3.78
12	M O Road	11.89	0.002	0.017	0.161	0.003	12.07	0.18	1.51
13	Kottapuram	6.67	0.318	0.004	0.023	0.001	7.02	0.35	4.92
14	Chembukkavu	10.63	1.052	0.027	0.145	0.005	11.86	1.23	10.36
15	Shornur Road	11.31	0.442	0.036	0.215	0.002	12.00	0.70	5.79
16	District Hospital	12.14	0.002	0.060	0.175	0.004	12.38	0.24	1.95
17	East Fort	11.62	1.139	0.034	0.199	0.005	13.00	1.38	10.60
18	Vanjikulam	8.55	0.001	0.017	0.146	0.003	8.72	0.17	1.92
	Total	**174.43**	**14.08**	**0.48**	**2.65**	**0.07**	**191.71**	**17.28**	**9.01**

Note:

- ***Sampled Transmission and Distribution (T&D) loss calculation and analysis were conducted for all 18 feeders. It was observed that certain discrepancies in consumer consumption data and feeder meter data during the audit period had an impact on the overall loss calculation results.***

Energy flow diagram [2]is given below in figure:

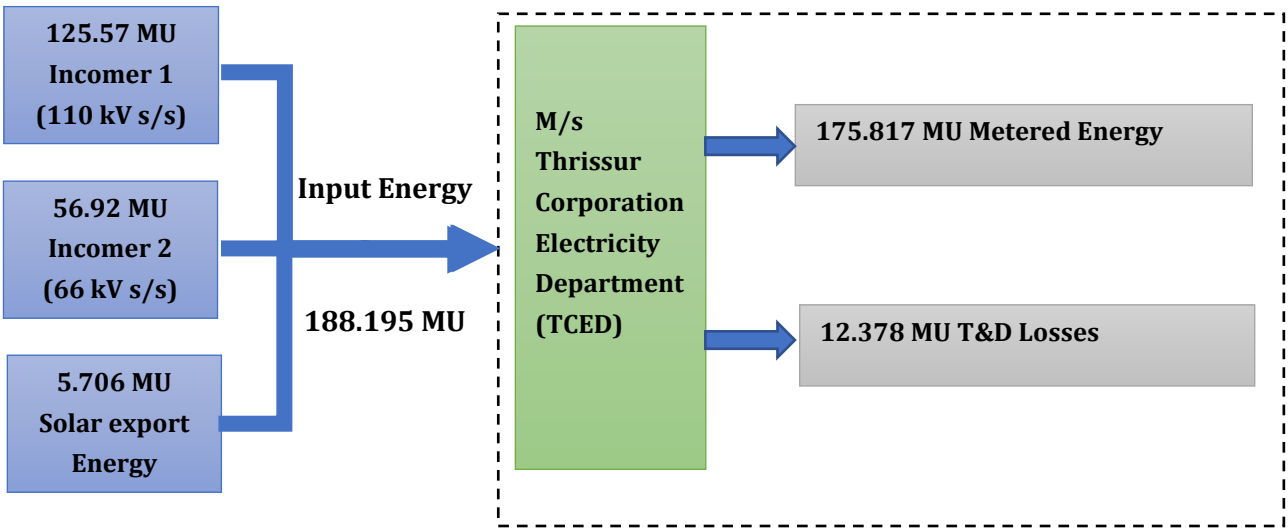

Figure 1: Energy flow diagram - TCED

- *Input energy = the energy received at the TCED for distribution.*
- *Solar export energy = the energy received at the TCED feeder as distributed RE - includes DISCOM own generation and prosumers exported energy.*
- *Metered energy = energy metered at the consumer end.*
- *T&D losses = Net losses*

[2] *The two incomers from the KSEB side—110 kV and 66 kV—have been consolidated into a single 110 kV incomer effective from January 2025.*

FORM INPUT ENERGY

The table below shows the **major energy parameters for the FY 2024-25**

Table 12: Major energy parameters – TCED DISCOM

Form-Input energy (Details of Input energy & Infrastructure)			
A. Summary of energy input & Infrastructure			
S. No	**Parameters**	**Period from April 2024 to March 2025**	**Remarks (Source of data)**
A.1	Input Energy purchased (MU)	188.195	Electricity bill & solar export
A.2	Transmission loss (%)	0%	
A.3	Transmission loss (MU)	0	
A.4	Energy sold outside the periphery (MU)	0.00	
A.5	Open access sale (MU)	0	
A.6	EHT sale	0	
A.7	Net input energy (received at DISCOM periphery or at distribution point)-(MU)	188.195	Total net input
A.8	Is 100% metering available at 66/33 kV (Select yes or no from list)	Yes	
A.9	Is 100% metering available at 11 kV (Select yes or no from list)	Yes	
A.10	% of metering available at DT	69.29%	343 out of 495 transformers
	Total number of DT (Nos)	495	
A.11	Total number of consumers (Nos)	42995	
	Number of HT consumers (Nos)	138	
	Number of LT consumers (Nos)	42817	
A.12	% of metering available at consumer end	100%	
A.13	No of feeders at 66kV voltage level	0	
A.14	No of feeders at 33kV voltage level	0	
A.15	No of feeders at 11kV voltage level	18	
A.16	No of LT feeders' level	0	Not available
A.17	Line length (ckt. km) at 66kV voltage level	0	
A.18	Line length (ckt. km) at 33kV voltage level	4.2	Measured through HT line mapping
A.19	Line length (ckt. km) at 11kV voltage level	119.13	Measured through HT line mapping
A.20	Line length (km) at LT level	287.953	Measured through LT line mapping
A.21	Length of Aerial Bunched Cables	1.88	Measured through HT line mapping
A.22	Length of Underground Cables	82.34	Site measurement
A.23	HT/LT ratio	1/2.30	

Table 13: Metered reading of input energy

B. Meter reading of Input energy at injection points																	
S. No	Zone	Circle	Voltge Level (KV)	Feeder Name	Feeder Metering Status (Metered/ unmetered/ AMI/AMR)	Status of Meter (Functional /Non-functional)	Metering Date	Feeder Type (Agri/ Industrial /Mixed)	Status of Communication			Period from April 2024 to March 2025				Remarks (Source of data)
							Date of last actual meter reading/ communication		% data received through automatically if feeder AMR	Number of hours when meter was unable to communicate in period	Total Number of hours in the period	Meter S. No	CT/ PT ratio	Import (MU)	Export (MU)	
B. 1	TCED	TCED	110	VIPL	Metered	Functioning	01-04-2025	Mixed	0	0	NA	X2005320	200/1	125.572	-	110 kV s/s
B. 2	TCED	TCED	66	OLVI	Metered	Functioning	01-04-2025	Mixed	0	0	NA	17052040	200/1	56.917	-	66 kV s/s
B. 3	TCED	TCED	0.415	Multiple feeders	Metered	Functioning	01-04-2025	Mixed	0	0	NA	-	-	0.423		Consumer bills
B. 4	TCED	TCED	11	Multiple feeders	Metered	Functioning	01-04-2025	Mixed	0	0	NA	-	-	5.282		Consumer bills
Total (MU)														**188.195**	**0.0**	
Net input energy at DISCOM periphery (MU)														**188.195**		

4. ASSET MAPPING OF DISCOM

MAPPING – DT & 11 KV OH LINE

Mapping of the transformer, pole and 11 kV consumers were done to evaluate the distance which helps to calculate the HT line loss in TCED.

GPS mapping was made using the Google map/ GPS meter collecting the latitude and longitude, and later projected into the relevant free software by naming the specific pole, DT and 11 kV consumer with serial numbers. The GPS mapping of HT lines done for 18 feeders and the details are analyzed in this section.

Feeder wise HT line mapping is given below in charts in representation purpose and the distance of the DT from each substation is given in the table below.

FEEDER WISE MAPPING

There are 18 mapped feeders, and the new distribution transformers (DTs) on the line have been updated and mapped as well. The feeders are listed below.

Table 14: Feeder List

Feeder No	Feeder	No: of Transformer
1	Mission Quarters	32
2	Veliyanoor	19
3	Koorkkenchery	23
4	Paravattani	25
5	Arnattukkara	33
6	Jubilee Mission	Dedicated feeder HT
7	Vivekodhayam	22
8	Bini	17
9	Poonkunam	36
10	Keralavarma	38
11	Ramanilayam	19
12	M O Road	31
13	Kottappuram	40
14	Chembukavu	25
15	Shornur Road	44
16	DH	34
17	East Fort	29
18	Vanjikulam	28
	Total	**495**

Feeder-wise high-tension (HT) line mapping is provided in the charts for representation purposes. The distance of the DT from the switching station is detailed in the table below.

1. ***MISSION QUARTERS FEEDER***

The following table shows the 11-kV line distance in the Mission quaters feeder

Table 15: HT line distance –Mission quarters feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
	SS	Substation Feeder		10.517368	76.219734	**UG**	XLPE	300			
SS	P1	Post		10.517291	76.219765	**UG**	XLPE	300	9	10	19
P1	AB1	New Millenium Kuries		10.51727	76.219783	**OH**	Racoon		3		3
AB1	G1	Ground		10.51702	76.219535	**UG**	XLPE	300			0
G1	G2	Ground		10.517205	76.219359	**UG**	XLPE	300			0
G2	G3	Ground		10.517306	76.219262	**UG**	XLPE	300			0
G3	G4	Ground		10.517625	76.219598	**UG**	XLPE	300			0
G4	G5	Ground		10.517799	76.219449	**UG**	XLPE	300			0
G5	G6	Ground		10.51785	76.219466	**UG**	XLPE	300			0
G6	25	Millenium Kuries	LT	10.517831	76.219504	**UG**	XLPE	300	169	20	189
P1	G7	Ground		10.517559	76.21972	**UG**	XLPE	300	30		30
G7	G8	Ground		10.520088	76.222571	**UG**	XLPE	300	419		419
G8	RMU1	RMU30101		10.519931	76.222671	**UG**	XLPE	300	20		20
RMU1	G9	Ground		10.520251	76.222543	**UG**	XLPE	300			0
G9	G10	Ground		10.520454	76.222912	**UG**	XLPE	300	84		84
G10	RMU2	RMU30102		10.520485	76.222842	**UG**	XLPE	300	8		8
RMU2	27	Alice Legacy	LT	10.520596	76.222759	**UG**	XLPE	300	15	45	60
RMU2	G10	Ground		10.520454	76.222912	**UG**	XLPE	300	8		8
G10	G11	Ground		10.519577	76.221687	**UG**	XLPE	300			0
G11	RMU3	RMU30103		10.519438	76.221832	**UG**	XLPE	300			0
RMU2	11	Sky Tower	LT	10.519334	76.221878	**UG**	XLPE	300	200		200
RMU1	G12	Ground		10.519007	76.223046	**UG**	XLPE	300			0
G12	AB2	ABL50102		10.519669	76.225781	**UG**	XLPE	300	426		426

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB2	AB3,02(D)	ABI50103, Fathima Nagar, (ABFN)	LT	10.520148	76.225806	**OH**	Racoon		53		53
ABFN	AB4	ABI50104		10.521428	76.225855	**OH**	Racoon		142		142
AB2	P2	Post		10.519653	76.22553	**OH**	Racoon				0
P2	P3	Post		10.519569	76.225014	**OH**	Racoon		85		85
P3	P4	Post		10.519533	76.224732	**OH**	Racoon				0
P4	AB5	AB Navani Garden		10.519505	76.224719	**OH**	Racoon		35		35
AB5	1	Navani Heights(C)	LT	10.519414	76.224792	**UG**	XLPE	300	13	12	25
P3	AB6	AB Navani Garden		10.518907	76.225036	**OH**	Racoon		73		73
AB6	21 (c)	Navani Garden	LT	10.519082	76.224872	**UG**	XLPE	240	26	5	31
AB2	P5, AB7	Post,AB Jos		10.519408	76.225764	**OH**	Racoon		29		29
AB7	RMU4,31	RMU 30104, Jos Alukkas	HT	10.519162	76.225578	**UG**	XLPE	400	34	5	39
P5	P6	Post		10.518977	76.22575	**OH**	Racoon				0
P6	P7	Post		10.517783	76.225704	**OH**	Racoon		180		180
P7	AB8	AB-Muttichuokaran		10.517792	76.225084	**OH**	Racoon				0
AB8	3	Muttichuokaran (C/D)	LT	10.517813	76.225082	**OH**	Racoon		70		70
P7	AB9, AB10, 04	ABL50105, AB joy, Kallu Shapp (D) 250	LT	10.516503	76.225666	**OH**	Racoon		142		142
AB10	G13	Ground		10.51711	76.225689	**UG**	XLPE	300			0
G13	G14	Ground		10.517211	76.225683	**UG**	XLPE	300			0
G14	RMU5	RMU30105		10.517217	76.225746	**UG**	XLPE	300			0
RMU5	28	RMU30105, Joy Alukkas	HT	10.517157	76.225887	**UG**	XLPE	300	102	20	122
AB9	AB11	ABL50113,AB Kalyan		10.516411	76.225257	**OH**	Racoon		46		46
AB11	G15	Ground		10.516519	76.225209	**UG**	XLPE	300			0
G15	RMU7,30	RMU30107,Kalyan Hyper Market (c)	LT	10.517014	76.225236	**UG**	XLPE	300	68	8	76
AB11	P8	Post		10.516209	76.224508	**OH**	Racoon				0
P8	AB12	AB-Precious Home		10.51598	76.223846	**OH**	Racoon		162		162
AB12	G16	Ground		10.516075	76.223766	**UG**	XLPE	300			0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G16	G17	Ground		10.51751	76.22343	**UG**	XLPE	300			0
G17	G18	Ground		10.517008	76.222249	**UG**	XLPE	300			0
G18	RMU8	RMU30108		10.51696	76.222253	**UG**	XLPE	300			0
RMU8	32 (C)	Precious Home 315	LT	10.51685	76.22168	**UG**	XLPE	300	387	25	412
AB12	08 (D), P9	Post, Cemetery(D)	LT	10.515753	76.223291	**OH**	Racoon		66		66
P9	P10	Post		10.515613	76.22265	**OH**	Racoon				0
P10	P11	Post		10.515162	76.221407	**OH**	Racoon				0
P11	P12	Post		10.514403	76.221485	**OH**	Racoon		302		302
P12	P13	Post		10.513815	76.221737	**OH**	Racoon				0
P13	P14	Post		10.51349	76.221871	**OH**	Racoon		109		109
P14	AB13	AB-Pleasant hill		10.513453	76.221812	**OH**	Racoon		8		8
AB13	23 (c)	Pleasant hill	LT	10.51337	76.221527	**UG**	XLPE	150	33	10	43
P14	09,AB14	AB-Microwave, Microwave (D) 150kVA	LT	10.513288	76.221966	**OH**	Racoon		24		24
AB14	10(c)	BSNL Microwave (C)	HT	10.513163	76.222021	**OH**	Racoon		40		40
P12	P15	Post		10.514295	76.221027	**OH**	Racoon				0
P15	P16	Post		10.51408	76.220986	**OH**	Racoon				0
P16	P17	Post		10.51373	76.220738	**OH**	Racoon				0
P17	P18, AB15	Post , AB Chem		10.513664	76.220599	**OH**	Racoon		140		140
AB15	12 (c)	Chemmannam 160	LT	10.513213	76.220624	**UG**	XLPE	300	50	50	100
P18	P19	Post		10.513623	76.220136	**OH**	Racoon				0
P19	AB16	ABL50110		10.513571	76.219903	**OH**	Racoon				0
AB16	P20	Post		10.513913	76.219561	**OH**	Racoon		130		130
P20	AB17	ABL50111		10.513915	76.218859	**OH**	Racoon		78		78
AB17	AB18	AB ESAF		10.513917	76.218495	**OH**	Racoon		40		40
AB18	RMU10	RMU30110		10.513822	76.218574	**UG**	XLPE	300			0
RMU10	34 (C)	ESAF Jazz Tower (C)	LT	10.513847	76.218741	**UG**	XLPE	300	32	20	52
AB18	P21	Post		10.513939	76.217947	**OH**	Racoon		60		60

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P21	14 (D), AB19	AB SIB,SIB (D), 500	LT	10.513903	76.21795	**OH**	Racoon		4		4
AB19	15 (C)	SIB2 (c) HT Meter	HT	10.513581	76.217949	**UG**	XLPE	300	36	5	41
P21	P22	Post		10.513951	76.21728	**OH**	Racoon				0
P22	P23	Post		10.513957	76.217162	**OH**	Racoon		86		86
P23	AB20	AB Vasan		10.514099	76.21716	**OH**	Racoon		16		16
AB20	16 (c)	Vasan Eye Care (HT)	HT	10.514294	76.217137	**UG**	XLPE	300	22	10	32
P23	P24	Post		10.51398	76.216753	**OH**	Racoon		45		45
P24	AB21	AB Das		10.514044	76.216747	**OH**	Racoon		7		7
AB 21	17 (c)	Das Continental HT	HT	10.514522	76.216668	**UG**	XLPE	300	54	20	74
P24	AB22	ABL 50112,RMU WP		10.513951	76.216266	**OH**	Racoon		54		54
AB22	G28	Ground		10.513984	76.216053	**UG**	XLPE	300			0
G28	G29	Ground		10.514279	76.215883	**UG**	XLPE	300			0
G29	RMU12	RMU30207		10.515646	76.215875	**UG**	XLPE	300	213		213
AB17	G19	Ground		10.513965	76.219473	**UG**	XLPE	300			0
G19	G20	Ground		10.514548	76.218934	**UG**	XLPE	300			0
G20	G21	Ground		10.515071	76.218169	**UG**	XLPE	300			0
G21	G22	Ground		10.515362	76.217812	**UG**	XLPE	300			0
G22	G23	Ground		10.515951	76.217601	**UG**	XLPE	300			0
G23	RMU11	RMU 30301		10.515947	76.217538	**UG**	XLPE	300	384		384
P20	P32	Post		10.514119	76.219365	**OH**	Racoon		31		31
P32	13(D)	St. Joseph's (D) 315	LT	10.514157	76.219435	**OH**	Racoon		9		9
P32	P31	Post		10.514586	76.218886	**OH**	Racoon				0
P31	P30	Post		10.514793	76.218647	**OH**	Racoon		108		108
P30	P26	Post		10.515147	76.218054	**OH**	Racoon		76		76
P26	P27	Post		10.515181	76.218181	**OH**	Racoon				0
P27	P28	Post		10.515448	76.21854	**OH**	Racoon				0
P28	P29	Post		10.515844	76.21918	**OH**	Racoon				0
P29	20 (c)	Retreat Apartment	LT	10.515835	76.219187	**OH**	Racoon		147		147

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P26	P25	Post		10.515816	76.217635	**OH**	Racoon		91		91
P20	P33	Post		10.513334	76.220144	**OH**	Racoon				0
P33	P34	Post		10.512227	76.220738	**OH**	Racoon		230		230
P34	P35	Post (AB)		10.512239	76.220891	**OH**	ABC		17		17
P35	G24	Ground		10.512486	76.221466	**UG**	XLPE	300			0
G24	22 (c)	Skyline Infinity (Mundupalam)	LT	10.512246	76.221472	**UG**	XLPE	300	95	50	145
P34	P36	Post AB Asset)		10.511977	76.220815	**OH**	Racoon		29		29
P36	G24-1	Ground		10.51197	76.220906	**UG**	XLPE	300			0
G24-1	G25	Ground		10.511543	76.221088	**UG**	XLPE	300			0
G25	RMU9	RMU 30109		10.51158	76.221359	**UG**	XLPE	300	98		98
RMU9	26 (C)	Asset 400	LT	10.511676	76.221426	**UG**	XLPE	185	13	10	23
RMU9	G26	Ground		10.511534	76.221394	**UG**	XLPE	300			0
G26	G27	Ground		10.511865	76.223916	**UG**	XLPE	300			0
G27	AB23, 07	ABL 50108, Avenue road	LT	10.511926	76.22389	**UG**	XLPE	300	309		309
AB9	P37	Post		10.515065	76.226485	**OH**	Racoon		183		183
P37	P38	Post		10.51502	76.226537	**OH**	Racoon				0
P38	5	Xavy Thekkath 05 (L)	LT	10.515292	76.22687	**OH**	Racoon		55		55
P37	P39	Post		10.514399	76.226872	**OH**	Racoon		85		85
P39	P40	Post		10.51445	76.226902	**OH**	Racoon				0
P40	AB25	AB Aquatic		10.51472	76.22776	**OH**	Racoon		105	15	120
AB25	RMU6, 29	RMU30106, Aquatic 16	LT	10.514335	76.227915	**UG**	XLPE	300	46	2	48
AB25	P41	Post		10.514913	76.228523	**OH**	Racoon				0
P41	AB26	AB Federal		10.514856	76.228613	**OH**	Racoon		98		98
AB26	19(C)	Federal Residency 500	LT	10.514686	76.228834	**UG**	XLPE	300	31	30	61
P39	P42	Post		10.513846	76.227205	**OH**	Racoon				0
P42	P43	Post		10.513339	76.227349	**OH**	Racoon				0
P43	06 , P43-1	Post Swimming Pool	LT	10.512828	76.227428	**OH**	Racoon		187		187
P43-1	P44	Post		10.512534	76.227328	**OH**	Racoon				0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P44	P45	Post (to Avenue)		10.512158	76.227353	**OH**	Racoon		76		76
P45	P46	Post		10.512067	76.22779	**OH**	Racoon				0
P46	P47	Post		10.512074	76.228123	**OH**	Racoon				0
P47	P48	Post		10.512218	76.228852	**OH**	Racoon				0
P48	P49	Post		10.512434	76.229155	**OH**	Racoon		208		208
P49	P50	Post		10.512659	76.229431	**OH**	Racoon				0
P50	33 , P 50-1	Mulberry Department	LT	10.512922	76.229849	**OH**	Racoon		93		93
P50-1	P51	Post		10.513116	76.230183	**OH**	Racoon				0
P51	P52	AB SN Temp		10.513142	76.230226	**OH**	Racoon		48		48
P52	AB27	AB Mulberry		10.513095	76.230234	**OH**	Racoon		5		5
AB27	18	Mulberry	LT	10.512673	76.230443	**UG**	XLPE	150	52	40	92
P52	G30	Ground		10.513255	76.230704	**UG**	XLPE	300			0
G30	G31	Ground		10.513521	76.231284	**UG**	XLPE	300			0
G31	G32	Ground		10.51369	76.232611	**UG**	XLPE	300			0
G32	24 , P52-1	SN Temple 250	LT	10.513636	76.23268	**UG**	XLPE	300	280	10	290
P52-1	G33	Ground		10.513729	76.232789	**UG**	XLPE	300			0
G33	G34	Ground		10.51375	76.233389	**UG**	XLPE	300			0
G34	G35	Ground		10.513538	76.23439	**UG**	XLPE	300			0
G35	G36	Ground		10.513231	76.236005	**UG**	XLPE	300			0
G36	AB28	ABI 50107,		10.514016	76.236231	**UG**	XLPE	300	465		465
P45	P53	Post		10.512289	76.226992	**OH**	Racoon				0
P53	P54	Post		10.512218	76.225872	**OH**	Racoon				0
P54	P55	Post		10.512037	76.225043	**OH**	Racoon				0
P55	AB23	ABL 50108		10.511926	76.22389	**OH**	Racoon		383		383
AB23	RMU	RMU-Skyline Avenue		10.511965	76.224103	**UG**	XLPE	300		20	20
RMU	Skyline Avenue	Skyline Avenue Suites (Tr-1& 2)	LT	10.512826	76.224128	**UG**	XLPE	300	102		102
P20	P32, 38 (C)	AB Kalyan , 10138, Kalyan 99	LT	10.514119	76.219338	OH	Racoon			31	

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
RMU 5	G14	Ground		10.517217	76.225746	UG	XLPE				
G14	G37	Ground		10.517615	76.225765	UG	XLPE	300			
G37	RMU 13	RMU-Valapilla		10.517577	76.225880	UG	XLPE	300		64	21
RMU 13	G38	Ground		10.517572	76.225945	UG	XLPE	185			
G38	G39	Ground		10.517508	76.226287	UG	XLPE	185			
G39	39 (C)	Valapila Communication -	LT	10.517458	76.226304	UG	XLPE	185		54	
RMU4, 31	G40	Ground		10.519196	76.225740	UG	XLPE	300			
G40	G41	Ground		10.519655	76.225764	UG	XLPE	300			
G41	G42	Ground		10.520067	76.225743	UG	XLPE	300			
G42	RMU 14	RMU30114		10.520068	76.225630	UG	XLPE	300		126	
RMU 14	40 (C) -	Park Inn Suite-	HT	10.520060	76.225532	UG	XLPE	300		11	4
P22	G43	Ground		10.514550	76.217759	UG	XLPE	300			
G43	RMU 15	RMU Elite		10.514561	76.217722	UG	XLPE	300		53	
RMU 15	37 (C)	Elite Homes & Reality	LT	10.514583	76.217592	UG	XLPE	150		4.1	

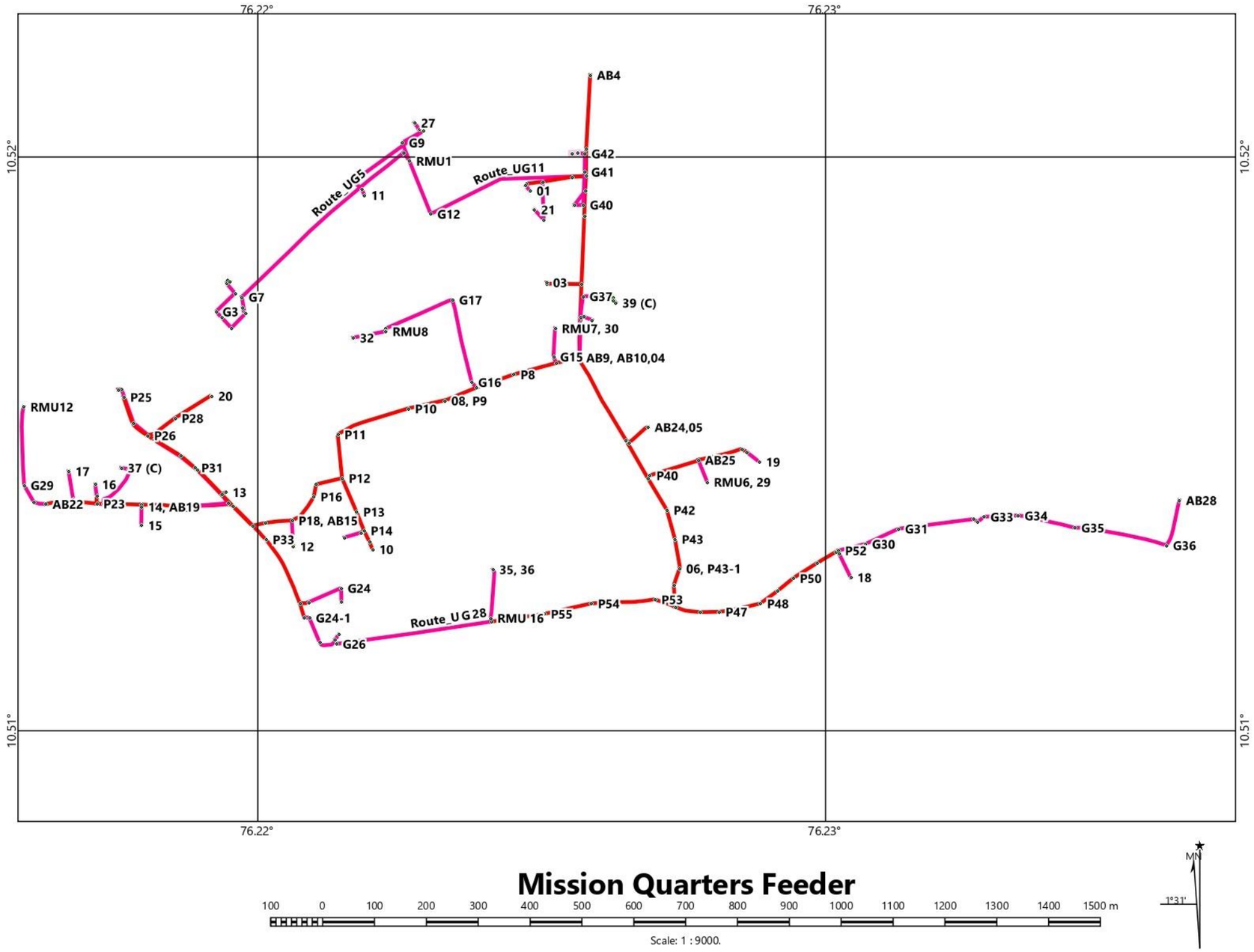

Figure 2: Mission quarters feeder

2. ***VELIYANOOR***

The following table shows the 11-kV line distance in the Veliyanoor feeder

Table 16: HT line distance – Veliyanoor feeder

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
	S-S	Substation feeder		10.517355	76.219663						
S-S	P1	Post		10.517120	76.219563	**UG**	XLPE	300	28.2	32	60.2
P1	P2	Post		10.517085	76.219594	**OH**	Racoon		7.68		7.68
P2	1	Assay Hall Marking	LT	10.517240	76.219773	**OH**	Racoon		26.7		26.7
P1	P3, 21	Airtel Tower	LT	10.517268	76.219442	**OH**	Racoon		19.76		19.76
P3	P24	AB Manorama		10.517096	76.219261	**OH**	Racoon		21.27		21.27
P24	2	Manorama	HT	10.516767	76.219534	**UG**	XLPE	300	48	7	55
P2	G14-1	Ground		10.517000	76.219530	**UG**	XLPE	300			0
G14-1	G14-2			10.517180	76.219360	**UG**	XLPE	300			0
G14-2	G14			10.516906	76.218968	**UG**	XLPE	300			0
G14	22	Chicago	LT	10.516700	76.218968	**UG**	XLPE	300	117.95	10	127.95
P24	P25	Post		10.516706	76.218659	**OH**	Racoon		78.25		78.25
P25	3	C J Tower	LT	10.516875	76.218557	**OH**	Racoon		24.38		24.38
P25	P26	Post		10.516106	76.217811	**OH**	Racoon		114.59		114.59
P26	P27	Post		10.516010	76.217036	**UG**	XLPE	300	326.13	10	336.13
P27	RMU30201	RMU		10.515988	76.217010	**UG**	XLPE	300	5.67	9	14.67
P27	4	Sakthan Market	LT	10.515958	76.216764	**OH**	Racoon		30.32		30.32
AB Sakthan	RMU30206	RMU		10.515919	76.216744	**UG**	XLPE	300	4.84		4.84
RMU30206	26	Edu Mart	HT	10.515732	76.216878	**UG**	XLPE	240	25.36	7	32.36
P27	P28	Post		10.516006	76.217500	**OH**	Racoon				
P28	ABL50203	AB		10.516365	76.217354	**OH**	Racoon				
ABL50203	P29	Post		10.517367	76.217196	**OH**	Racoon				

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P29	P30	Post		10.517411	76.217316	**OH**	Racoon				
P30	P31	Post		10.517614	76.217937	**OH**	Racoon				
P31	P31-1	Post		10.518050	76.217844	**OH**	Racoon		25		25
RMU30201	G15	Ground		10.516405	76.217503	**UG**	XLPE	300			
G15	G16	Ground		10.517390	76.217294	**UG**	XLPE	300			
G16	G17	Ground		10.517614	76.217937	**UG**	XLPE	300			
G17	G18	Ground		10.518070	76.217907	**UG**	XLPE	300			
G18	RMU30202	RMU		10.518060	76.217850	**UG**	XLPE	300			
RMU30202	14	Latin Palli		10.518050	76.217844	**UG**	XLPE	300	323.63		323.63
RMU30202	G19	Ground		10.518082	76.217924	**UG**	XLPE	300			0
G19	G20	Ground		10.518431	76.218937	**UG**	XLPE	300			0
G20	24	RMU30203, Vivid Press	LT	10.517753	76.219192	**UG**	XLPE	300	209.44	10	219.44
RMU30202	G24	Ground		10.517670	76.217912	**UG**	XLPE	300			0
G24	G25	Ground		10.517456	76.217245	**UG**	XLPE	300			0
G25	G26	Ground		10.517981	76.216941	**UG**	XLPE	300			0
G26	G27	Ground		10.518525	76.216588	**UG**	XLPE	300			0
G27	G28	Ground		10.519618	76.216723	**UG**	XLPE	300			0
G28	RMU30204	RMU		10.520465	76.216858	**UG**	XLPE	300	488.48		488.48
RMU30204	G31	Ground		10.520568	76.216720	**UG**	XLPE	300			0
G31	G32	Ground		10.520477	76.216184	**UG**	XLPE	300			0
G32	25	RMU30205, Sakunthala	HT	10.520222	76.215997	**UG**	XLPE	300	141.99		141.99
RMU30204	G29	Ground		10.520481	76.216802	**UG**	XLPE	300			0
G29	G30	Ground		10.521385	76.216822	**UG**	XLPE	300			0
G30	RMU31606	RMU		10.522609	76.216895	**UG**	XLPE	300	245.44		245.44
AB Sakthan	P4	Post		10.515999	76.216432	**OH**	Racoon		36.62		36.62
P4	G1	Ground		10.515939	76.215913	**UG**	XLPE	300			0

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G1	RMU30207	RMU		10.515870	76.215930	**UG**	XLPE	300			0
RMU30207	G2	Ground		10.515853	76.215567	**UG**	XLPE	300			0
G2	G3	Ground		10.516028	76.215361	**UG**	XLPE	300			0
G3	AB OWC	AB		10.516210	76.214917	**UG**	XLPE	300	186.3		186.3
AB OWC	20	OWC Plant	LT	10.516223	76.214920	**OH**	Racoon		4.02		4.02
AB OWC	AB Police	AB		10.516574	76.214587	**UG**	XLPE	300	53.71		53.71
AB Police	G21	Ground		10.516240	76.215451	**UG**	XLPE	300			0
G21	G22	Ground		10.516392	76.215671	**UG**	XLPE	300			0
G22	G23	Ground		10.518324	76.215873	**UG**	XLPE	300			0
G23	RMU30208	RMU		10.518371	76.215651	**UG**	XLPE	300			0
RMU30208	27	Office of COP	HT	10.518777	76.215659	**UG**	XLPE	300	416.45	50	466.45
AB Police	P5	Post		10.517182	76.213144	**OH**	Racoon				0
P5	P6	Post		10.517245	76.212674	**OH**	Racoon				0
P6	05	ABL50204, Ramanchira madom	HT	10.517227	76.212519	**OH**	Racoon		240.67		240.67
ABL50204	G2-1	Ground		10.517629	76.212579	**UG**	XLPE	300			0
G2-1	G3-1	Ground		10.517600	76.212537	**UG**	XLPE	300			0
G3-1	G4	Ground		10.518388	76.212586	**UG**	XLPE	300			0
G4	RMU31211	RMU		10.518355	76.212265	**UG**	XLPE	300	169.98		169.98
ABL50204	G5	Ground		10.517096	76.212591	**UG**	XLPE	300			
G5	P7	Post		10.516916	76.212593	**UG**	XLPE	300			
P7	P8	Post		10.516703	76.212606	**UG**	XLPE	300	60.01	40	100.01
P8	13	Hari Sree Apartment	LT	10.516706	76.212583	**OH**	Racoon			2.54	2.54
P8	G7	Ground		10.515926	76.212675	**UG**	XLPE	300			0
G7	G8	Ground		10.515914	76.213156	**UG**	XLPE	300			0
G8	G9	Ground		10.515340	76.213290	**UG**	XLPE	300			0
G9	G10	Ground		10.514978	76.213209	**UG**	XLPE	300			0

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G10	ABL50207, 7	Rashtra Deepika	LT	10.515052	76.212532	**UG**	XLPE	300	321.88		321.88
ABL50207	RMU30209	RMU		10.515076	76.212603	**UG**	XLPE	300	8.21		8.21
RMU30209	16	Rastra Deepika Press	HT	10.515136	76.212605	**UG**	XLPE	185	6.64		6.64
ABL50207	P19	Post		10.515046	76.212713	**OH**	Racoon				0
P19	AB joy	AB Joys palace		10.514975	76.212697	**OH**	Racoon		27.87		27.87
AB joy	8	Joy palace	HT	10.514889	76.212808	**UG**	XLPE	185	15.43	15	30.43
ABL50207	P20	Post		10.515069	76.212060	**OH**	Racoon		51.7		51.7
P20	9	MRG Flat	LT	10.514961	76.212087	**OH**	Racoon		12.31		12.31
P20	P21	Post		10.515140	76.211393	**OH**	Racoon		73.1		73.1
P21	G11	Ground		10.515177	76.211227	**UG**	XLPE	300			
G11	G12	Ground		10.515603	76.211381	**UG**	XLPE	300			
G12	RMU30210	RMU		10.515593	76.211409	**UG**	XLPE	300			
RMU30210	23	New Jwala Diamond Jewellery	HT	10.515598	76.211671	**UG**	XLPE	300	101.3	45	146.3
P21	P22	Post		10.515052	76.211590	**OH**	Racoon				0
P22	P23	Post		10.514674	76.210980	**OH**	Racoon		73.35		73.35
P23	AB Inland	AB		10.514677	76.210917	**OH**	Racoon		6.9		6.9
AB Inland	G13	Ground		10.514686	76.210722	**UG**	XLPE	185			0
G13	10	inland	LT	10.514755	76.210960	**UG**	XLPE	185	34.44	6	40.44
P23	ABI50208	AB		10.513886	76.210747	**OH**	Racoon		90.82		90.82
ABL50204	P9	Post		10.517186	76.212176	**OH**	Racoon				0
P9	P10	Post		10.517253	76.211889	**OH**	Racoon				0
P10	P11	Post		10.517364	76.211622	**OH**	Racoon		104.99		104.99
P11	P12	Post		10.517145	76.211564	**OH**	Racoon		23.55		23.55
P12	P13	Post		10.517039	76.211527	**OH**	Racoon				0
P13	AB PPY	AB PP Yohanan		10.517024	76.211514	**OH**	Racoon		15.32		15.32

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB PPY	15	P P Yohanan				**UG**	XLPE	240	10		10
P12	ABL50206	AB		10.517170	76.211392	**UG**	XLPE	300	16.4		16.4
ABL50206	AB Jwala 1	AB		10.517155	76.211030	**OH**	Racoon		39.93		39.93
AB Jwala 1	G6	Ground		10.516730	76.210961	**UG**	XLPE	300			0
G6	11	Jwala Diamond	LT	10.516670	76.211082	**UG**	XLPE	300	65.9	12	77.9
AB Jwala 1	P14	Post		10.517166	76.210722	**OH**	Racoon				0
P14	P15	Post		10.517160	76.210540	**OH**	Racoon				0
P15	P16	Post		10.517056	76.209794	**OH**	Racoon		134.8		134.8
P16	AB MT	AB		10.517035	76.209804	**OH**	Racoon		4.09		4.09
AB MT	12	Malabar Tower	LT	10.516946	76.209910	**UG**	XLPE	185	10.32	50	60.32
P16	AB Emerald	AB		10.517213	76.209596	**OH**	Racoon		30.9		30.9
AB Emerald	18, 19	Emerald 1, Emerald 2	HT, LT	10.517180	76.209539	**UG**	XLPE	300	7.23	30	37.23
P11	P17	Post		10.517725	76.211781	**OH**	Racoon		45.34		45.34
P17	AB Mani	AB		10.517658	76.211842	**OH**	Racoon		11.93		11.93
AB Mani	6	Manichitra Arcades	LT	10.517661	76.212197	**UG**	XLPE	300	38.86	5	43.86
P17	P17-1	Post		10.517876	76.211815	**OH**	Racoon				
P17-1	AB EMK	AB		10.518064	76.211849	**OH**	Racoon		37.56		37.56
AB EMK	17	EMKE Silks	HT	10.517785	76.211397	**UG**	XLPE	300	69.52	10	79.52
P17	P17-1	Post		10.517876	76.211815	**OH**	Racoon				
P17-1	P18	Post		10.518412	76.211925	**OH**	Racoon		77.22		77.22
AB PC	G32	Ground		10.51668	76.21572	**UG**	XLPE	300	-		-
G1	RMU30211	RMU		10.51668	76.21563	**UG**	XLPE	300	-		-
RMU30211	10228,	Skywalk Transformer	HT	10.5166	76.21559	**UG**	XLPE	300	183	12	195

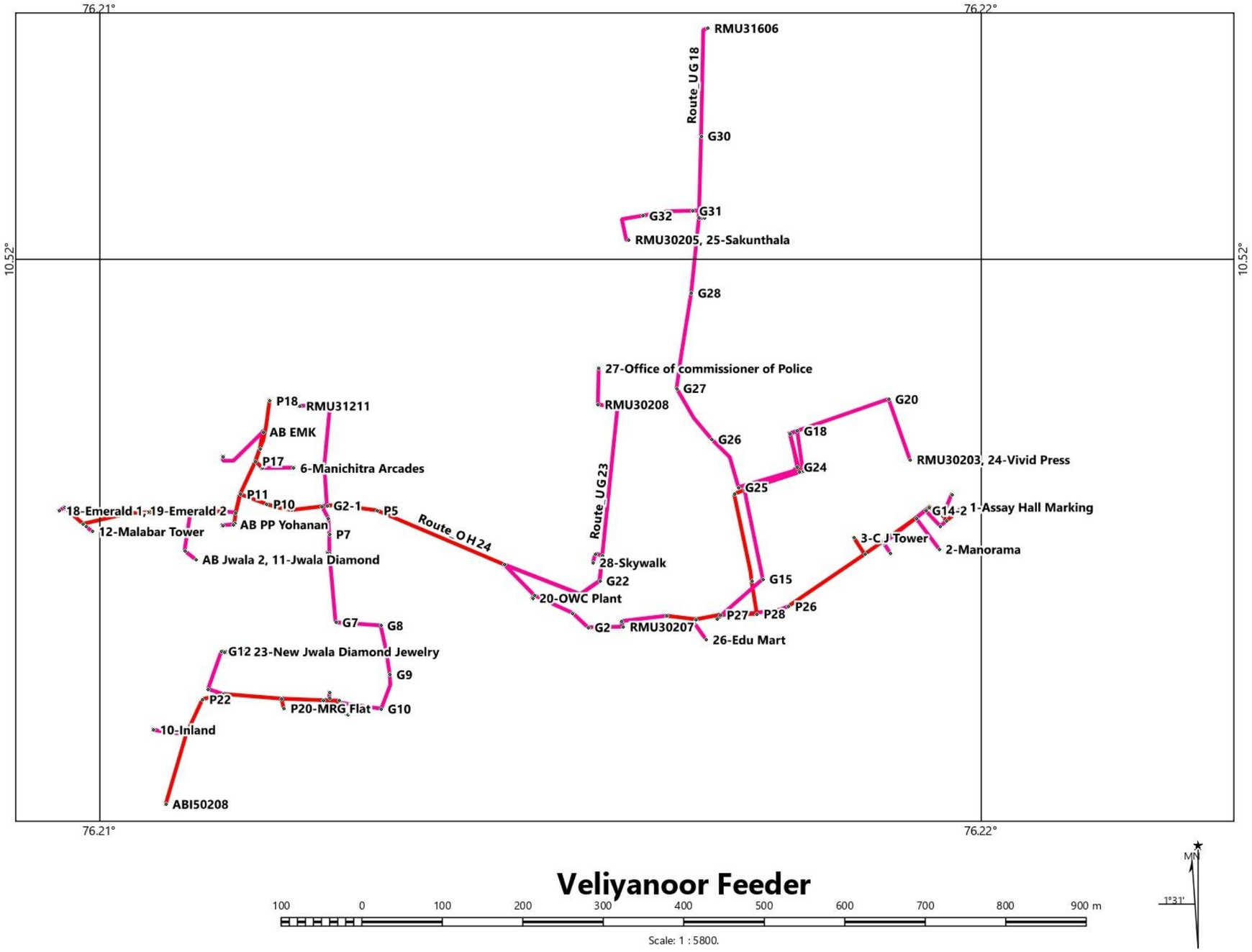

Figure 3: Veliyanoor feeder

3. ***KOORKKENCHERY FEEDER***

The following table shows the 11-kV line distance in the Koorkkenchery feeder.

Table 17: HT line distance – Koorkkenchery feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
	S-S	Substation feeder		10.517135	76.219407					
S-S	P1	Post		10.517229	76.219394	UG	300	10.74		10.74
P1	P2	Post		10.516079	76.217681	OH		216.87		216.87
P2	RMU1	RMU-30301		10.515940	76.217541	UG	300	21.71		21.71
RMU1	G11	Ground		10.516020	76.21746	UG	300	12.85		12.85
G11	RMU2	RMU-30201		10.516002	76.217265	UG	300	21.57	10	31.57
RMU1	G12	Ground		10.5159	76.2176	UG	300	8.32		8.32
G12	G1	Ground		10.515281	76.217852	UG	300		5	5
G1	G2	Ground		10.514711	76.217816	UG	300			0
G2	G13	Ground		10.51448	76.21773	UG	300			0
G13	G14	Ground		10.51412	76.2175	UG	300	210.82		210.82
G14	G3	Ground		10.513983	76.217229	UG	300	33.69		33.69
G3	P3	Post		10.513975	76.216334	UG	300	98.52	3	101.52
P3	P4	Post		10.513948	76.215683	UG	300	69.7	2	71.7
P4	G15	Ground		10.51401	76.21548	UG	300	23.96		23.96
G15	G16	Ground		10.51409	76.21315	UG	300	254.48		254.48
G16	G17	Ground		10.51393	76.21249	UG	300	74.71		74.71
G17	AB1, 1	ABL-50302, Commercial	LT	10.513734	76.211497	UG	300	112.76	15	127.76
AB1	G4	Ground		10.513728	76.211744	UG	300	30.74		30.74
G4	2	Casino	HT	10.513226	76.211783	UG	240	57.28	10	67.28
AB1	P5	Post		10.513803	76.210648	OH		92.93		92.93
P5	AB2	ABI-50208		10.513877	76.210741	OH		13.06		13.06
P5	P23	Post		10.51373	76.21073	OH		12.44		12.44
P23	P6	Post		10.513250	76.210612	OH		54.71		54.71
P6	G5	Ground		10.513396	76.209860	UG	300			0
G5	3	Smart Centre	LT	10.513500	76.209873	UG	300	98.37	5	103.37

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P6	P7	Post		10.512421	76.210760	OH		93.2		93.2
P7	G6	Ground		10.512229	76.210821	UG	300		10	10
G6	4	Sree Sailam	LT	10.511936	76.210050	UG	300	115.91		115.91
P8	P9	Post		10.510568	76.211192	OH		213.63		213.63
P9	P9-1	Post		10.510568	76.211075	OH		12.81		12.81
P9-1	5	Metro	HT	10.510538	76.210265	UG	185	94.41	10	104.41
P9	P10	Post		10.510099	76.211150	OH		52.08		52.08
P10	RMU3	RMU-30303		10.509968	76.211192	UG	300		10	10
RMU3	26	CK Plaza	LT	10.510005	76.211451	UG	300	43.85	10	53.85
P10	6	Alumkulam	LT	10.509821	76.211194	OH		27.23		27.23
6	G7	Ground		10.508329	76.211218	UG	240			0
G7	10	Thankamani	LT	10.508311	76.210904	UG	240	198.69		198.69
10	P11	Post		10.508220	76.210012	OH		98.16		98.16
P11	P11-1	Post		10.508349	76.210006	OH		14.28		14.28
P11-1	8	Skyline	LT	10.508474	76.210213	UG	300	26.54	5	31.54
P11	P12	Post		10.508144	76.209292	OH				0
P12	P13	Post		10.508169	76.208953	OH		116.47		116.47
P13	P13-1	Post		10.508270	76.208858	OH		15.16		15.16
P13-1	9	Love-Shore	LT	10.508759	76.208660	UG	150	58.27	50	108.27
P13	7	Kaja	LT	10.508194	76.208521	OH		47.37		47.37
6	P14	Post		10.508329	76.211218	OH		165.57		165.57
P14	P15	Post		10.507600	76.211206	OH		80.78		80.78
P15	RMU4	RMU-30304		10.507486	76.211638	UG	300		30	30
RMU4	11	Mannanthara Agencies	LT	10.507486	76.211638	UG	300	52.33	5	57.33
P15	P16	Post		10.505500	76.211316	OH		233.02		233.02
P16	P17	Post		10.505174	76.211337	OH		36.13		36.13
P17	15	Smart City	LT	10.505162	76.211205	OH		14.51		14.51
15	24	I-Vision	HT	10.504276	76.211012	UG	300	136.81	5	141.81
P17	P18	Post		10.504101	76.211411	OH		118.96		118.96
P18	17	Hi-Life	LT	10.504280	76.212928	UG	300	167.51	5	172.51
P18	AB3	ABL-50310		10.503620	76.211479	OH		53.48		53.48
AB3	RMU5	RMU-30306		10.503614	76.211526	UG	300		15	15

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
RMU5	25	Shangri-La-Fortune	LT	10.503609	76.211899	UG	300	48.07	5	53.07
AB3	P19	Post		10.503380	76.211524	OH				0
P19	AB4	ABL-50311		10.503186	76.211440	OH				0
AB4	16	Sun City	LT	10.503186	76.211440	OH		50.8		50.8
P16	P20	Post		10.505332	76.210463	OH		95.21		95.21
P20	P21	Post		10.505025	76.210402	OH				0
P21	13	Kanjirangadi	LT	10.503952	76.209568	OH		184.34		184.34
13	P22	Post		10.502503	76.208480	OH				0
P22	AB5	AB		10.502738	76.208187	OH		209.19		209.19
AB5	G8	Ground		10.502661	76.207606	UG	300			0
G8	14	Q-Apartment	LT	10.502879	76.207473	UG	300	92.34	5	97.34
P20	12	Kinar	LT	10.505326	76.210208	OH		27.92		27.92
P5	18	Veterinary	LT	10.513811	76.210537	OH		12.18		12.18
18	19	Dee Pee Plaza	LT	10.513914	76.209943	OH		66.01		66.01
19	P21	Post		10.514150	76.208370	OH				174.15
P21	20	Dhanya	LT	10.514088	76.208363	OH				6.9
P21	P21-1	Post		10.514143	76.208116	OH		27.81		27.81
P21-1	22,23	Railway	HT,HT	10.515153	76.208195	UG	185	117.75	10	127.75
P21-1	RMU6	RMU-30302		10.514273	76.207036	UG	300	119.09	10	129.09
20	AB6	ABL-50308		10.513104	76.208221	OH		109.95		109.95
AB6	21	Ice Plant	LT	10.512922	76.208477	OH		34.5		34.5
AB6	G9	Ground		10.511743	76.207351	UG	300			0
G9	G10	Ground		10.508494	76.206378	UG	300			0
G10	RMU7	RMU-30305		10.508207	76.207788	UG	300	718.81		718.81
RMU7	27	Forus Apartment	LT	10.508007	76.207782	UG	150	22.13		22.13
P11	SMR8	Post		10.5081578	76.2096738	**OH**				
SMR8	KJK5	Post		10.5080940	76.2096360	**OH**				
KJK5	KJK5-1	Post		10.5052604	76.2100634	**OH**	Racoon		400	
AB5	G18	Ground		10.5026795	76.2079458	**UG**	XLPE	300		
G18	G19	Ground		10.5022404	76.2079971	**UG**	XLPE	300		
G19	AB7	AB new		10.5023713	76.2087686	**UG**	XLPE	300		
AB7	G20	Ground		10.5026703	76.2117079	**UG**	XLPE	300		

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G20	16	Suncity		10.5031770	76.2115027	**UG**	XLPE	300	550	
15	G21	Ground		10.5048955	76.2112610	**UG**	XLPE	300		
G21	RMU-Park, 28	RMU Park, Park Residency	LT	10.5048955	76.2112610	**UG**	XLPE	300	43	5

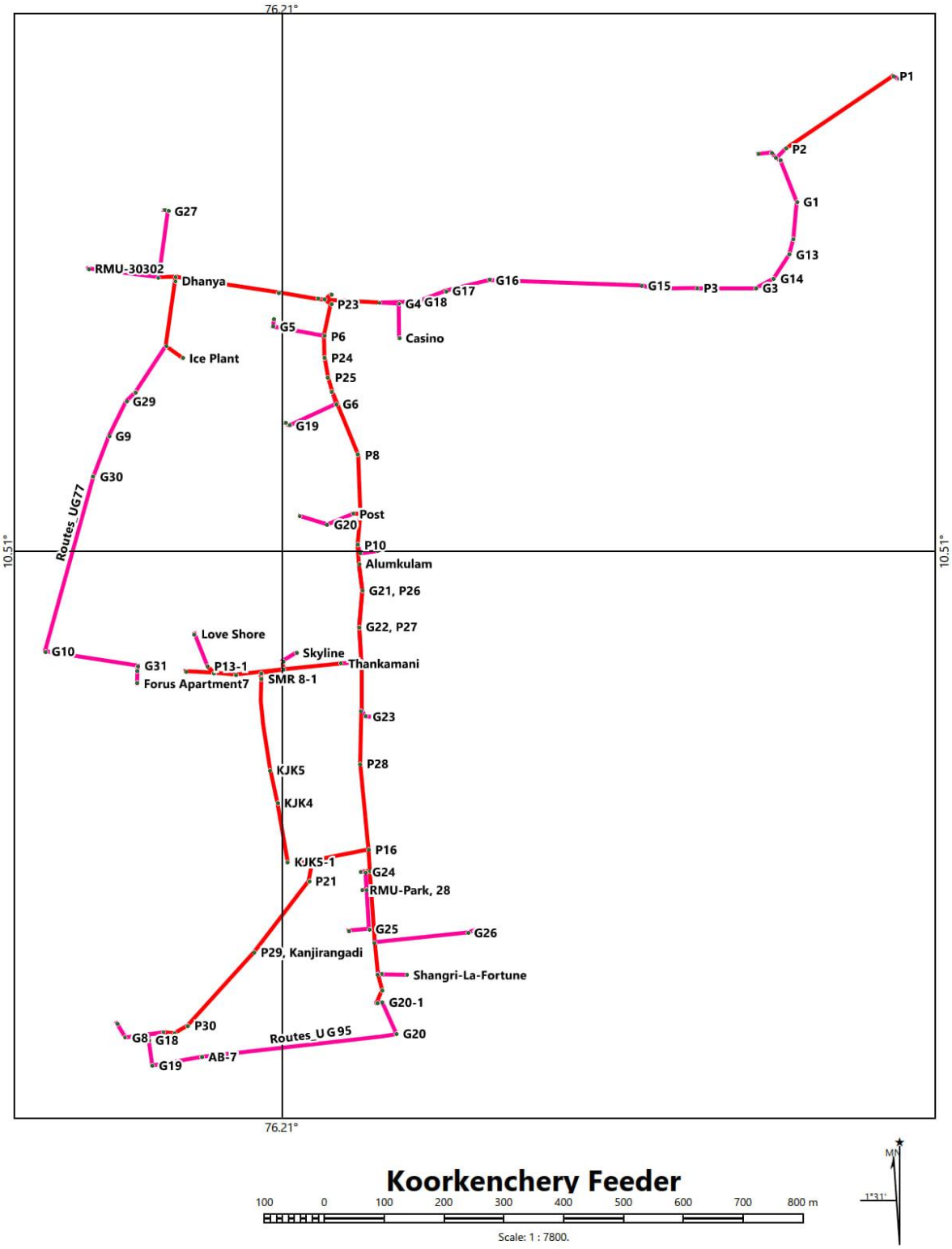

Figure 4: Koorkkenchery feeder

4. ***PARAVATTANI FEEDER***

The following table shows the 11-kV line distance in the Paravattani feeder

Table 18: HT line distance –Paravattani Feeder

Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
	S-S	Substation feeder	10.517316	76.219691						
S-S-2	2P	Post	10.517261	76.219740	**UG**	XLPE	300			-
2P	G1	Ground	10.517380	76.219910	**UG**	XLPE	300			-
G1	G2	Ground	10.517550	76.219750	**UG**	XLPE	300			-
G2	2P1	Post	10.520059	76.222618	**UG**	XLPE	300			-
2P1	G3	Ground	10.518950	76.223060	**UG**	XLPE	300			-
G3	G4	Ground	10.519730	76.225720	**UG**	XLPE	300			-
G4	AB1	ABL-50402	10.519805	76.225852	**UG**	XLPE	300	931	30	961
AB1	AB2	ABI-50103	10.520153	76.225758	**OH**	Racoon		40		40
AB1	P1	Post	10.519774	76.226122	**OH**	Racoon		30		30
P1	P1-1	AB-Jose Pottukaran	10.519736	76.226126	**OH**	Racoon		4		4
P1-1	11	Jose pottokoran	10.519489	76.226056	**UG**	XLPE	300	35	5	40
P1-1	Life Scan	Lifescan (315 kVA)	10.519645	76.226092	**UG**	XLPE	300	13	21	34
P1	P2	Post	10.519691	76.226866	**OH**	Racoon		82		82
P2	ABn, Fathima	ABL New, Fathima (250 kVA)	10.519206	76.226741	**OH**	Racoon		55		55
Abn	P2-1	AB-Manjali	10.519227	76.226835	**OH**	Racoon		9		9
P2-1	9	Manjali Enclave	10.518991	76.226882	**UG**	XLPE	185	35	5	40
P2	P3	Post	10.519375	76.228599	**OH**	Racoon		193		193
P3	P3-1	AB YAS	10.519321	76.228596	**OH**	Racoon		6		6
P3-1	1	YAS Residency/TT Complex	10.518962	76.228605	**UG**	XLPE	300	40	11	51
P3	P4	Post	10.519059	76.230379	**OH**	Racoon				198
P4	P4-1	AB Cedar	10.518746	76.230430	ABC	XLPE				34
P4-1	12	Cedar Apartment	10.518602	76.230057	**UG**	XLPE	300	49	5	54
P4	AB3	ABL-50403	10.518796	76.231426	**OH**	Racoon		118		118
AB3	2	Andrews	10.518745	76.231455	**OH**	Racoon		6		6
2	P6	Post	10.517758	76.231749	**OH**	Racoon		114		114
P6	AB9	ABL-50410	10.517628	76.231785	**OH**	Racoon		15		15
AB9	G5	Ground	10.516416	76.232005	**UG**	XLPE	300	136		136
G5	G6	Ground	10.516348	76.231082	**UG**	XLPE	300	104		104
G6	P7	AB Fortune	10.516424	76.231044	**UG**	XLPE	300	9		9
P7	10	In Land/Fortune Apartment	10.516509	76.230933	**UG**	XLPE	300	15		15
P7	G7	Ground	10.517747	76.230668	**UG**	XLPE	300	153		152
G7	RMU10	RMU-30410	10.517859	76.230545	**UG**	XLPE	300	17		17
RMU10	23	CIDBI Apartment	10.518134	76.230545	**UG**	XLPE	185	38	32	70
AB9	P7-1	Post	10.516998	76.232545	**OH**	Racoon		109		109
P7-1	P8	Post	10.516937	76.232844	**OH**	Racoon		33		33
P8	P8-1	AB Pentark	10.516403	76.232943	**UG**	XLPE	300	73	10	83
P8-1	25	Pentark East Park	10.516314	76.233337	**UG**	XLPE	150	49	12	61
P8	P9	Post	10.516856	76.233670	**OH**	Racoon	300	91		91
P9	P10	Post	10.516966	76.233621	**OH**	Racoon	300	13		13
P10	P10-1	AB Wheel	10.517526	76.233629	**OH**	Racoon		60		60
P10-1	8	Wheels Apartment	10.517627	76.233602	**UG**	XLPE	150	22	5	27
AB3	RMU1, 24	RMU30401, SNA	10.51873	76.23211	**UG**	XLPE	300	80	70	150
AB3	G8	Ground	10.518810	76.232177	**UG**	XLPE	300	82		82
G8	AB4	ABL-50404	10.520351	76.232312	**UG**	XLPE	300	173		173

Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB4	P5, 3	Post, Unnimossa	10.5204394	76.2323586	**OH**	Racoon	300	11		11
AB4	RMU2, 14	RMU30402, Sundale Apartment	10.5200728	76.2326466	**UG**	XLPE	300	58	10	68
RMU2	RMU3, 27	RMU30403, Able Tower	10.5208145	76.2315234	**UG**	XLPE	300	158		158
P5	16	Homeo	10.5196024	76.2335907	**OH**	Racoon				163
16	P5-1	Post	10.519423	76.234441	**OH**	Racoon	300			95
P5-1	P5-2	Post	10.519573	76.235103	**OH**	Racoon	300	75		75
P5-2	AB6	ABL-50411, ABL50412	10.5197139	76.2353868	**OH**	Racoon	300	35		35
AB6	5	Paravattani Park	10.520350	76.2362215	**OH**	Racoon	300	115		115
5	P11	Post	10.520809	76.236897	**OH**	Racoon	300	90		90
P11	RMU7	RMU30407	10.520510	76.2367836	**UG**	XLPE	300	46		46
RMU7	15	GEM Hospital(315 kVA)	10.5204513	76.2369888	**UG**	XLPE	300	30	25	55
P11	P12	Post	10.521832	76.2387516	**OH**	Racoon	300	232		232
P12	P13	Post	10.5219379	76.2390057	**UG**	XLPE	300	30	20	50
P13	6	Paravattani	10.5226186	76.240308	**OH**	Racoon	300	161		161
6	P14	Post	10.5229869	76.2414791	**OH**	Racoon	300	135		135
P14	P14-1	Post	10.521050	76.2417765	**OH**	Racoon		217		217
P14-1	18	Store	10.520876	76.240876	**UG**	XLPE	300	100	10	110
AB6	17	Double Horse	10.518408	76.236069	**OH**	Racoon		163		163
17	P15	Post	10.517034	76.236371	**OH**	Racoon		157		157
P15	P16	Post, AB-Asset	10.516418	76.236443	**OH**	Racoon		69		69
P16	RMU8	RMU30408	10.5164168	76.2366303	**UG**	XLPE	300	21		21
RMU8	26	Asset Precious	10.5160357	76.2365593	**UG**	XLPE	300	43		43
P16	AB7	ABL-50413	10.514729	76.236411	**OH**	Racoon		187		187
AB7	13	Deepak Tom(Jewelima Diamonds)	10.515494	76.235448	**UG**	XLPE	300	166	20	166
13	RMU9, 22	RMU30409, Sisters	10.515087	76.235637	**UG**	XLPE	300	61		61
AB7	AB8, 7	Kankapadan, ABI-50107	10.514019	76.236277	**OH**	Racoon		80		80
P5	AB5	ABL50405	10.520894	76.232395	**UG**	XLPE	300		20	50
AB5	G9	Ground	10.521738	76.232354	**UG**	XLPE	300			93
G9	G10	Ground	10.521817	76.233048	**UG**	XLPE	300	77		77
G10	P17	Post	10.522846	76.233721	**UG**	XLPE	300	137	10	147
P17	G12	Ground	10.526317	76.23423	**UG**	XLPE	300	397		397
G12	AB10, 4	ABL-50407/ABL-50408, Ottu company	10.526291	76.234257	**UG**	XLPE	300	4	20	24
AB10	G12	Ground	10.526317	76.23423	**UG**	XLPE	300	4		4
G12	P18	Post	10.527272	76.234004	**UG**	XLPE	300	109	20	109
P18	G13	Ground	10.5272238	76.2330394	**UG**	XLPE	300	107		107
G13	G14	Ground	10.527921	76.232895	**UG**	XLPE	300	79		79
G14	G15	Ground	10.527969	76.232653	**UG**	XLPE	300	27		27
G15	G16	Ground	10.528381	76.232501	**UG**	XLPE	300	49		49
G16	AB11	ABI-50409	10.528336	76.231755	**UG**	XLPE	300	82	10	92
AB10	G12	Ground	10.526317	76.23423	**UG**	XLPE	300	4		4
G12	G17	Ground	10.525700	76.234197	**UG**	XLPE	300	74		74
G17	RMU2, 19	RMU-30404, Pookuzhypadam	10.525326	76.233055	**UG**	XLPE	300	139	5	144
RMU2	G18	Ground	10.524669	76.229320	**UG**	XLPE	300	415		415
G18	G19	Ground	10.5241494	76.2295816	**UG**	XLPE	300	82		82
G19	RMU3	RMU-30405	10.524144	76.229747	**UG**	XLPE	300	22		22
RMU3	20	Mystic Rose(Mulberry)	10.524170	76.229983	**UG**	XLPE	150	36	10	46
RMU3	G20	Ground	10.524173	76.229377	**UG**	XLPE	300			
G20	RMU4	RMU-30406	10.5233967	76.229539	**UG**	XLPE	300			128
RMU4	21	Nirmalamatha	10.5233762	76.2294951	**UG**	XLPE	150	134	5	139
RMU7	G21			10.520630	76.236838	UG	XLPE	300		

Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G21	G22			10.520970	76.237429	UG	XLPE	300		
G22	RMU(Bhvana)			10.521152	76.237347	UG	XLPE	300		
RMU(Bhavana)	31	Bhavana textiles - Transformer (200KVA)	HT	10.521203	76.237418	UG	XLPE	300	127	

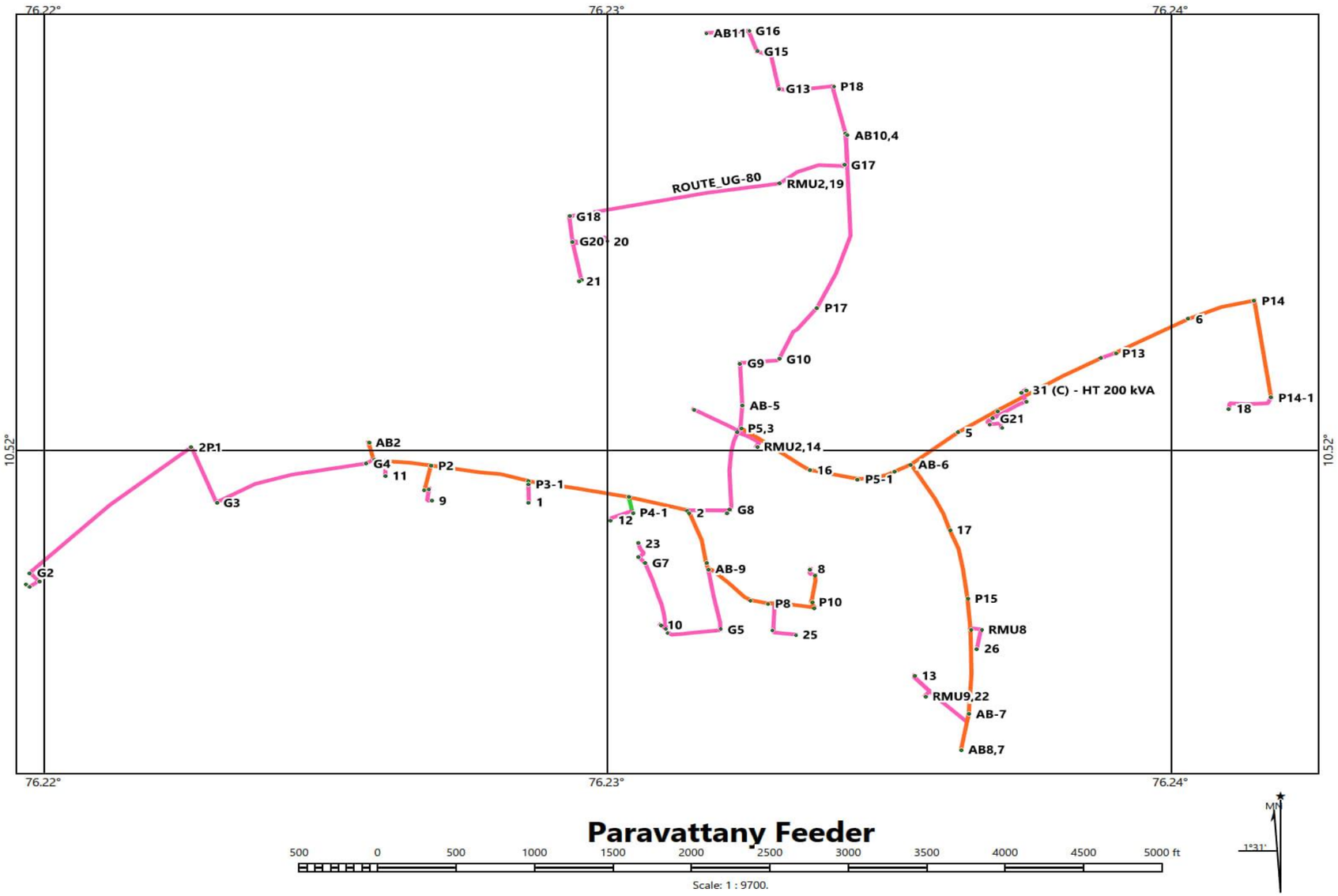

Figure 5: Paravattani feeder

5. ***ARANATTUKARA FEEDER***

The following table shows the 11-kV line distance in the Aranattukara feeder

Table 19: HT line distance – Aranattukara feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
SS	2P	Post		10.535215	76.214668	**UG**	XLPE	300	1		21	21
2P	G1	Ground		10.535163	76.215006	**UG**	XLPE	300	1			0
G1	P1	Post		10.531559	76.215286	**UG**	XLPE	300	1		21	21
P1	P2	Post		10.530001	76.215078	**UG**	XLPE	300	1		21	21
P2	G2	Ground		10.529472	76.214997	**UG**	XLPE	300	1			0
G2	G3	Ground		10.529214	76.216235	**UG**	XLPE	300	1			0
G3	G4	Ground		10.527413	76.215903	**UG**	XLPE	300	1			0
G4	G5	Ground		10.526990	76.216700	**UG**	XLPE	300	1			0
G5	8P	Post		10.522750	76.216537	**UG**	XLPE	300	1		21	21
8P	G6	Ground		10.522704	76.213044	**UG**	XLPE	300	1			0
G6	G7	Ground		10.522216	76.212836	**UG**	XLPE	300	1			0
G7	P3	Post		10.522260	76.212540	**UG**	XLPE	300	1		21	21
P3	G8	Ground		10.522255	76.212205	**UG**	XLPE	300	1			0
G8	G9	Ground		10.521833	76.212192	**UG**	XLPE	300	1			0
G9	G10	Ground		10.521627	76.211648	**UG**	XLPE	300	1			0
G10	G11	Ground		10.521122	76.211478	**UG**	XLPE	300	1			0
G11	RMU1	RMU 30501		10.521182	76.211154	**UG**	XLPE	300	1	2385.97	6	2391.97
RMU1	G12	Ground		10.521037	76.210189	**UG**	XLPE	300	1			0
G12	G13	Ground		10.521635	76.210142	**UG**	XLPE	300	1			0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
G13	P4	Post		10.521565	76.209426	**UG**	XLPE	300	1		15	15
P4	G14	Ground		10.521475	76.208831	**UG**	XLPE	300	1			0
G14	G15	Ground		10.522062	76.208758	**UG**	XLPE	300	1			0
G15	RMU2,1	RMU30502, Mothimahal	HT	10.522028	76.208538	**UG**	XLPE	300	1	411.81	7	418.81
RMU2	G16	Ground		10.523465	76.208386	**UG**	XLPE	300	1			0
G16	P5	Post		10.523450	76.208140	**UG**	XLPE	300	1	210.95	6	216.95
P5	AB1	ABI-50504		10.523503	76.208362	**OH**	Racoon			23.75		23.75
P5	P6	Post		10.523345	76.207798	**OH**	Racoon			38.55		38.55
P6	RMU3,3	RMU30503, Ambilikala arcade	LT	10.523092	76.20785	**UG**	XLPE	240	1	36.79	10	46.79
P6	P7	Post		10.523351	76.207419	**OH**	Racoon			42.47		42.47
P7	AB2	ABI-50505		10.523530	76.207403	**OH**	Racoon			21.89		21.89
P7	P8	Post		10.523301	76.207227	**OH**	Racoon			21.01		21.01
P8	G17	Ground		10.523400	76.207214	**UG**	XLPE	300	1	1	5	5
G17	G18	Ground		10.523458	76.207695	**UG**	XLPE	300	1	1		0
G18	RMU4, 5	RMU30504, VRM tower	LT	10.523568	76.207642	**UG**	XLPE	240	1	1	5	82.56
P8	AB3, 16	ABL50506, Krishnamani	LT	10.523132	76.206512	**OH**	Racoon			80.46		80.46
AB3	G19	Ground		10.522531	76.206568	**UG**	XLPE	300	1	1	5	5
G19	G20	Ground		10.521615	76.206271	**UG**	XLPE	300	1	1		0
G20	G21	Ground		10.521444	76.206117	**UG**	XLPE	300	1	1		0
G21	G22	Ground		10.520914	76.206188	**UG**	XLPE	300	1	1		0
G22	AB4	AB		10.520901	76.206123	**UG**	XLPE	300	1	1		261.49
AB4	17	Pentarc	LT	10.520835	76.205969	**UG**	XLPE	240	1	1	6	31.51
AB4	P9	Post		10.520544	76.206294	**OH**	Racoon			42.54		42.54

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P9	7	Ashtapati Apartment	LT	10.520564	76.206686	**UG**	XLPE	240	1	1	10	52.97
P9	P10	Post		10.519624	76.206359	**OH**	Racoon			103.04		103.04
P10	G23	Ground		10.519842	76.207483	**UG**	XLPE	300	1	1		0
G23	G24	Ground		10.519936	76.207573	**UG**	XLPE	300	1	1		0
G24	P11	Post		10.519851	76.208238	**UG**	XLPE	300	1	1	7	7
P11	10, 14	Routh Tower1,2	HT,LT	10.519273	76.208162	**UG**	XLPE	300	1	1	20	297.57
AB3	P12	Post		10.523073	76.206092	**OH**	Racoon			46.43		46.43
P12	P12-1	Post		10.522999	76.206074	**OH**	Racoon			8.41		8.41
P12-1	18, 19, 20	Centre Point 1, 2, 3	HT, HT, LT	10.522742	76.206013	**UG**	XLPE	300	1	1	25	54.2
P12	P13	Post		10.522936	76.205722	**OH**	Racoon			43.24		43.24
P13	P13-1	Post		10.523000	76.205729	**UG**	XLPE	300				0
P13-1	RMU	RMU-PCK		10.523205	76.20594	**UG**	XLPE	300				0
RMU	PCK	PCK - NewTransformer	LT	10.523276	76.205962	**UG**	XLPE	300		47.7	10	57.7
P13	RMU5	RMU		10.523216	76.205909	**UG**	XLPE	300	1	1		0
P13	P14	Post		10.522925	76.205646	**OH**	Racoon			8.41		8.41
P14	P14-1	Post		10.523083	76.205618	**OH**	Racoon			17.74		17.74
P14-1	22	Kochu Bhavan	LT	10.523412	76.205606	**OH**	Racoon			36.41		36.41
P14-1	21	HDFC	LT	10.523152	76.205462	**UG**	XLPE	300	1	1	15	33.7
P14	P15	Post		10.522848	76.205287	**OH**	Racoon			40.21		40.21
P15	23	Colour House	HT	10.523379	76.205255	**UG**	XLPE	300	1	1	6	64.84
P15	AB5,9	ABL50507, Spoon	LT	10.522442	76.205269	**UG**	XLPE	300	1	1	3	47.95
AB5	P16	Post		10.522219	76.205282	**OH**	Racoon			24.71		24.71
P16	P16-1	Post		10.522207	76.205119	**OH**	Racoon					0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P16-1	11	Income Tax Office	HT	10.522135	76.205009	**UG**	XLPE	300	1	1	15	47.33
P16	P17	Post		10.5217	76.2052	**OH**	Racoon			57.69		57.69
P17	42	P17-1, Parayil Lane	LT	10.521738	76.205124	**OH**	Racoon			9.55		9.55
P17-1	24	Presidency	LT	10.521691	76.205091	**OH**	Racoon			6.33		6.33
P17	P18	Post		10.521047	76.205065	**OH**	Racoon					0
P18	P18-1	Post		10.521012	76.205132	**OH**	Racoon			84.06		84.06
P18-1	41	Jaya Lakshmi Silks	HT	10.520846	76.205440	**UG**	XLPE	300	1	1	20	58.39
P15	P19	Post		10.522612	76.204097	**OH**	Racoon			132.85		132.85
P19	P19-1	Post		10.522820	76.204111	**OH**	Racoon			23.06		23.06
P19-1	25	Malabar Gold	HT	10.523029	76.204109	**UG**	XLPE	300	1	1	30	53.12
P19	P20	4P		10.522539	76.203786	**OH**	Racoon			34.99		34.99
P20	G25	Ground		10.522279	76.202415	**UG**	XLPE	300	1	1		0
G25	AB6	ABL-50508		10.521607	76.201725	**UG**	XLPE	300	1	1		260.22
AB6	AB7	ABI-50509		10.521668	76.201755	**OH**	Racoon			7.5		7.5
AB6	P21	Post		10.520268	76.200788	**OH**	Racoon			180.2		180.2
P21	P21-1	Post		10.520191	76.200923	**OH**	Racoon			17.06		17.06
P21-1	8	Link Offset	HT	10.519930	76.201387	**UG**	XLPE	300	1	58.42	10	68.42
P21	P22	Post		10.519674	76.200391	**OH**	Racoon			78.77		78.77
P22	30	MRG Samyuktha Apartment	LT	10.519657	76.200526	**OH**	Racoon			14.9		14.9
30	31	VIP Apartment	LT	10.519698	76.200590	**OH**	Racoon			8.35		8.35
P22	29	Mental Hospital	LT	10.518809	76.199680	**OH**	Racoon			128.47		128.47
29	6	Nethaji Ground	LT	10.518756	76.199638	**OH**	Racoon			7.45		7.45
6	P23	Post		10.518716	76.199710	**OH**	Racoon					0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P23	AB8	ABL-50510		10.515662	76.197337	**OH**	Racoon					0
AB8	32	Toppin Moola	LT	10.515453	76.197162	**OH**	Racoon			465.19		465.19
P24	G26	Ground		10.515538	76.197057	**UG**	XLPE	300	1		7	7
G26	RMU6	RMU-30505		10.516758	76.197205	**UG**	XLPE		1			0
RMU6	G27	Ground		10.516049	76.197107	**UG**	XLPE		1			0
G27	RMU7	RMU-30506		10.516053	76.196997	**UG**	XLPE		1			0
RMU7	2	Confident Gemini	LT	10.515849	76.196713	**UG**	XLPE	300	1	280.34	10	290.34
P24	P25, AB9	ABL-50512		10.515273	76.196968	**OH**	Racoon					0
P25	P26	Post		10.513641	76.196896	**OH**	Racoon					0
P26	AB10	ABL-50513		10.513643	76.195624	**OH**	Racoon			349.04		349.04
AB10	33	Malayalam School	LT	10.513620	76.195484	**OH**	Racoon			15.53		15.53
AB10	P27,34	Arnattukkara market	LT	10.511747	76.195637	**OH**	Racoon			209.36		209.36
P27	G28	Ground		10.511771	76.194854	**UG**	XLPE		1			0
G28	G29	Ground		10.510590	76.194788	**UG**	XLPE		1			0
G29	P28	Post		10.510578	76.194679	**UG**	XLPE		1	236.01	7	243.01
P28	P29, 35	Laloor	LT	10.510596	76.194569	**OH**	Racoon			12.2		12.2
P24	AB11	ABL-50511		10.515429	76.197368	**OH**	Racoon					0
AB11	P30	Post		10.515287	76.198153	**OH**	Racoon			110.06		110.06
P30	RMU8, 38	RMU-30507, Global Plaza	LT	10.515342	76.198183	**UG**	XLPE	300	1	6.91	3	9.91
RMU8	G30	Ground		10.515149	76.198557	**UG**	XLPE		1			0
G30	RMU9	RMU-30508		10.515246	76.198603	**UG**	XLPE		1			0
RMU9	39	Le-shore	LT	10.515318	76.198633	**UG**	XLPE	300	1	67.98		67.98
P30	P31, 37	Maani	LT	10.514893	76.199786	**OH**	Racoon			183.99		183.99

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P31	RMU10	RMU-30509		10.514864	76.199485	**UG**	XLPE		1			0
RMU10	40	Govind Green Apartment	LT	10.514641	76.199411	**UG**	XLPE	300	1	59.07	3	62.07
P31	AB12	ABL-50514		10.514480	76.201325	**OH**	Racoon					0
AB12	P32	Post		10.514363	76.201952	**OH**	Racoon			244.26		244.26
P32	AB13	AB		10.514243	76.201924	**OH**	Racoon					0
AB	P32-1	Post		10.513617	76.201764	**OH**	Racoon					0
P32-1	P32-2	Post		10.513538	76.201674	**OH**	Racoon					0
P32-2	P32-3	Post		10.510629	76.200810	**OH**	Racoon					0
P32-3	15	Kizhakkepuram	LT	10.510575	76.200007	**OH**	Racoon			530.27		530.27
P32	P33	Post		10.514337	76.202154	**OH**	Racoon			22.3		22.3
P33	36	AAZ Complex	LT	10.514248	76.202092	**OH**	ABC			11.96		11.96
P33	P34,	AB14		10.513776	76.204230	**OH**	Racoon					
P34	P35, 13	Excise	LT	10.513751	76.204350	**OH**	Racoon			249.12		249.12
P35	P36	Post		10.513684	76.204492	**OH**	Racoon			17.22		17.22
P34	G31	Ground		10.513999	76.203284	**UG**	XLPE	300	1		5	5
G31	27	Sai Service	HT	10.513457	76.203194	**UG**	XLPE		1	201.58		201.58
P36	P36-1	Post		10.514265	76.204405	**OH**	Racoon			64.97		64.97
P36-1	12	Cheloor	LT	10.514544	76.203703	**UG**	XLPE	300	1	82.81	7	89.81
P37	P38	Post		10.513720	76.204846	**OH**	Racoon			1.92		1.92
P38	28	C A Arcade	LT	10.513666	76.204990	**UG**	XLPE	300	1	16.86	7	23.86
P36	P37	Post		10.513729	76.204831	**OH**	Racoon			37.66		37.66
P37	P37-1	Post		10.513586	76.204770	**OH**	Racoon			17.17		17.17
P37-1	26	Excise Acadamy	HT	10.513397	76.204839	**UG**	XLPE	300	1	22.23	21	43.23
P38	P39	Post		10.513800	76.205778	**OH**	Racoon					0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P39	P40,4	P&T Poothole	LT	10.514221	76.206040	**OH**	Racoon			157.78		157.78
P40	RMU11	RMU-30302		10.514276	76.207032	**UG**	XLPE	300	1	112.17	5	117.17
RMU-9	RMU-12	RMU30510		10.515277	76.197797	UG	XLPE	300		90	10	100
RMU-12	10544	CITY SHINE BUILDING	LT	10.515263	76.197818	UG	XLPE	300		5	5	10

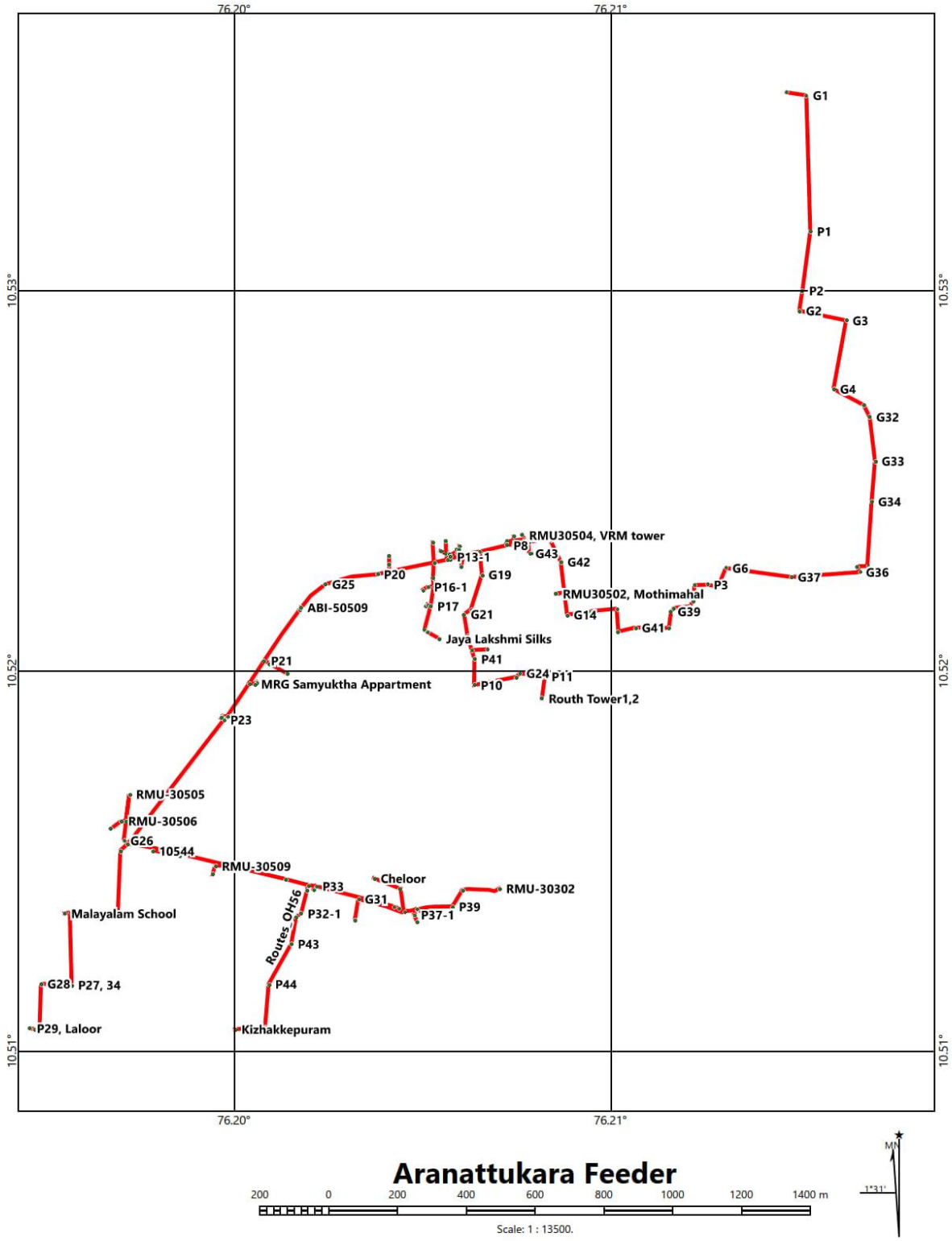

Figure 6: Arnattukara feeder

6. ***JUBILEE MISSION FEEDER***

Jubilee mission feeder is the only dedicated feeder inside the DISCOM. The supply provided from the 66-kV substation in the Aswini. The detail of mapping of the feeder is given in the table below.

Table 20: HT line distance – Jubilee mission feeder

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
SS		Substation feeder		10.535185	76.214764	**UG**	XLPE	300		10	10
SS	P1	Post		10.535247	76.214725	**UG**	XLPE	300			0
P1	G1	Ground		10.535184	76.214900	**UG**	XLPE	300			0
G1	G2	Ground		10.534978	76.215035	**UG**	XLPE	300			0
G2	G3	Ground		10.533455	76.215075	**UG**	XLPE	300			0
G3	G4	Ground		10.533382	76.216132	**UG**	XLPE	300			0
G4	G5	Ground		10.533006	76.216531	**UG**	XLPE	300			0
G5	G6	Ground		10.532984	76.217128	**UG**	XLPE	300			0
G6	G7	Ground		10.533180	76.217414	**UG**	XLPE	300			0
G7	G8	Ground		10.532808	76.219361	**UG**	XLPE	300			0
G8	G9	Ground		10.532399	76.222235	**UG**	XLPE	300			0
G9	G10	Ground		10.531810	76.226219	**UG**	XLPE	300			0
G10	G11	Ground		10.531020	76.226247	**UG**	XLPE	300			0
G11	G12	Ground		10.530896	76.226196	**UG**	XLPE	300			0
G12	G13	Ground		10.527708	76.226094	**UG**	XLPE	300			0
G13	G14	Ground		10.525349	76.225990	**UG**	XLPE	300			0
G14	G15	Ground		10.523079	76.225892	**UG**	XLPE	300			0
G15	G16	Ground		10.521214	76.225809	**UG**	XLPE	300			0
G16	G17	Ground		10.520915	76.225789	**UG**	XLPE	300			0
G17	01, 02 - Jubilee Mission	Jubilee Mission	HT	10.520737	76.226735	**UG**	XLPE	300	2806.34	5	2811.34

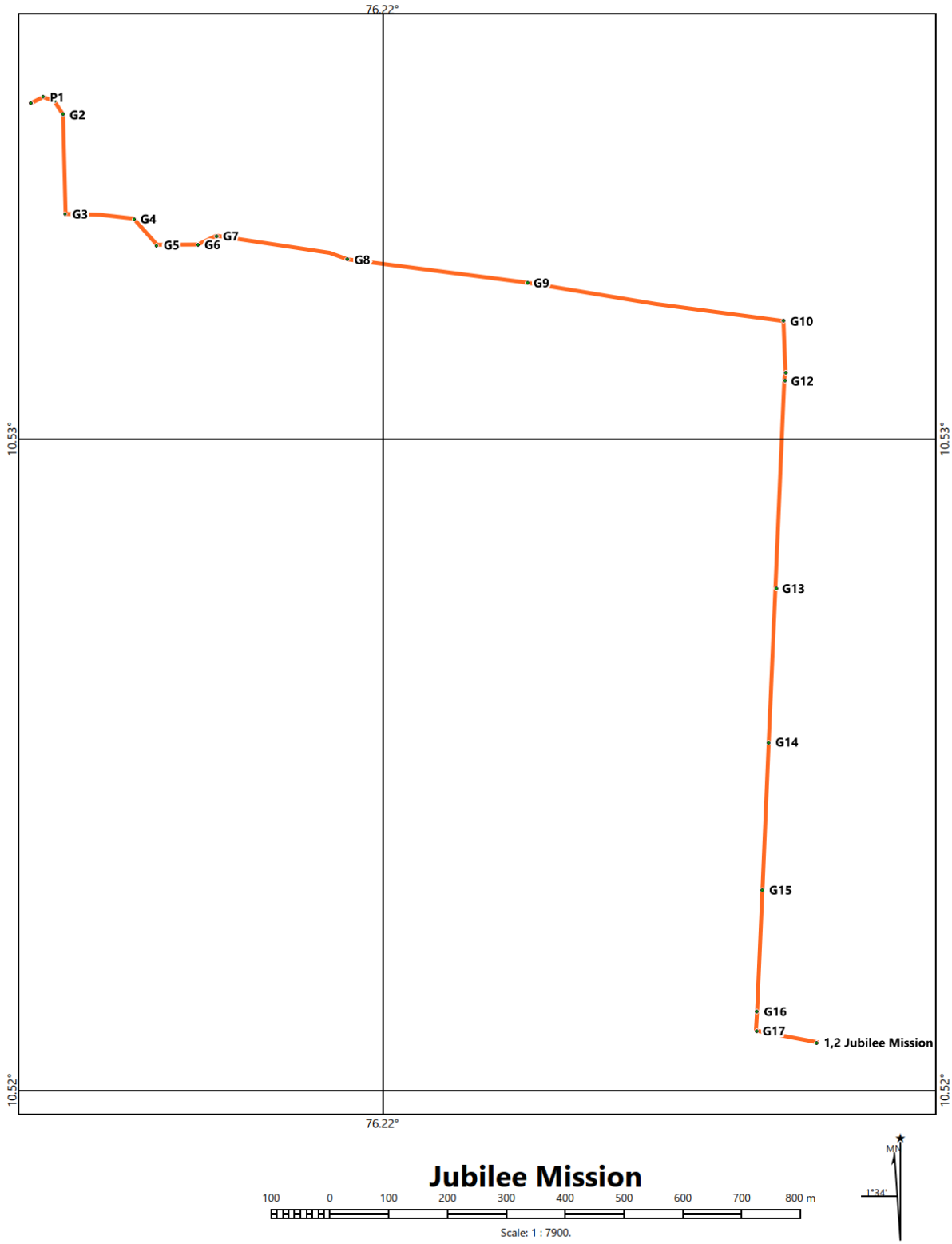

Figure 7: Jubilee mission feeder

7. ***VIVEKODAYAM FEEDER***

The following table shows the 11-kV line distance in the Vivekodayam feeder

Table 21: HT line distance –Vivekodayam feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
SS		Substation		10.535194	76.214591							
SS	P1	Substation feeder		10.535198	76.214825	**UG**	XLPE	300	1	25.62	55	80.62
P1	P2	Post		10.535236	76.214901	**OH**	Racoon			9.32		9.32
P2	P3	Post		10.534813	76.214965	**OH**	Racoon			47.31		47.31
P3	P4	Post		10.534748	76.215028	**OH**	Racoon			9.96		9.96
P4	P29	AB aswani		10.534517	76.215031	**OH**	Racoon			25.55		25.55
P29	31	Aquatic (Sai)	LT	10.534494	76.21496	**OH**	Racoon			8.18		8.18
P29	G1	Ground		10.534560	76.215007	**UG**	XLPE	300	1			
G1	G2	Ground		10.534597	76.214725	**UG**	XLPE					
G2	LBS	Aswini Hospital		10.534563	76.214736	**UG**	XLPE	300	1	41.36		41.36
LBS	01,02	Aswini Hospital	HT			**UG**	XLPE	150	2		40	40
P29	P5	Post		10.533255	76.215052	**OH**	Racoon			134.68		134.68
P5	P30	AB SG Complex		10.531338	76.215073	**OH**	Racoon			217		217
P30	G3	Ground		10.531405	76.215063	**UG**	XLPE	240	1			0
G3	15	SG Complex	HT	10.531427	76.214973	**UG**	XLPE	240		17.52		17.52
P30	P5-1	Post		10.531050	76.215095	**OH**	Racoon			31.95		31.95
P5	P6	Post		10.533251	76.214487	**OH**	Racoon			62.6		62.6
P6	P7	Post		10.533346	76.213460	**OH**	Racoon					0
P7	P7-1	Post		10.533444	76.213114	**OH**	Racoon					0
P7-1	P31	AB Govind Apartment		10.533484	76.213114	**OH**	Racoon			156.85		156.85
P31	G4	Ground		10.533604	76.213125	**UG**	XLPE	240	1			0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
G4	3	Govind Apartment	LT	10.533616	76.213024	**UG**	XLPE	240	1	24.46		24.46
P6	AB1,P32, P32'29	AB Swimming pool, AB silver rox, ABL50702, Swimming Pool TR	LT	10.532844	76.214458	**OH**	Racoon			49.23		49.23
P32'	G5	Ground		10.532888	76.213808	**UG**	XLPE	300	1			0
G5	RMU1	RMU30701		10.532755	76.213804	**UG**	XLPE	300	1	86.03		86.03
RMU1	28	Silver Roxx	LT	10.532661	76.213848	**UG**	XLPE	240	1	11.46		11.46
P32'	P8	Post		10.532428	76.214427	**OH**	Racoon			46.14		46.14
P8	P33	AB Kalindi		10.532444	76.214264	**OH**	Racoon			17.93		17.93
P33	14	Kalindi	LT	10.532383	76.214074	**UG**	XLPE	300	1	21.86	35	56.86
AB1	G6	Ground		10.532239	76.214421	**UG**	XLPE	300	1			0
G6	G7	Ground		10.532109	76.214662	**UG**	XLPE					0
G7	G8	Ground		10.531113	76.214438	**UG**	XLPE					0
G8	P34	AB Bhima		10.531109	76.214133	**UG**	XLPE	300	1	243.12		**243.12**
P34	G19	Ground				**UG**	XLPE	300				0
G19	4	Bhima	HT	10.530717	76.213987	**UG**	XLPE	300	1	61.77		61.77
P34	P9	Post		10.531108	76.212977	**OH**	Racoon			126.53		126.53
P9	P9-1	Post		10.530778	76.212920	**OH**	Racoon					0
P9-1	P35	AB vanvita		10.530742	76.212816	**OH**	Racoon			49.09		49.09
P35	5	Vanvita	HT	10.530800	76.212816	**UG**	XLPE	300	1	6.42	25	31.42
P9	AB2,AB3	ABI50703,ABL50704		10.531138	76.211802	**OH**	Racoon			128.65		128.65
AB2	G9	Ground		10.531077	76.211470	**UG**	XLPE	300	1	16.92		16.92
G9	G10	Ground		10.529868	76.211727	**UG**	XLPE			141.47		141.47
G10	G11	Ground		10.529850	76.211628	**UG**	XLPE			11.02		11.02
G11	P10	Post		10.529501	76.211025	**UG**	XLPE	300	1	76.46		76.46
P10	6	Capital Manner	LT	10.529441	76.211055	**OH**	Racoon			7.4		7.4

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P10	P11	Post		10.529294	76.210639	**OH**	Racoon			49.57		49.57
P11	P12	Post		10.529927	76.210698	**OH**	Racoon					0
P12	P13	Post		10.530257	76.210091	**OH**	Racoon					0
P13	P14	Post		10.530857	76.209991	**OH**	Racoon					0
P14	P14-1	Post		10.530990	76.209990	**OH**	Racoon					
P14-1	P36	AB1 sreekrishna		10.531005	76.210070	**OH**	Racoon			234.55		234.55
P36	G12	Ground		10.531012	76.210437	**UG**	XLPE	300	1			0
G12	G13	Ground		10.530867	76.210518	**UG**	XLPE					0
G13	P37	AB2 sreekrishna		10.530883	76.210721	**UG**	XLPE	300	1			0
P37	11	Sree Krishna Apartment	LT	10.530753	76.210736	**UG**	XLPE	300	1	92.48	16	108.48
P11	P15	Post		10.528695	76.210305	**OH**	Racoon			72.99		72.99
P15	P38,07	AB-Souparnika, Souparnika	LT	10.528683	76.210264	**OH**	Racoon			3.57		3.57
P38	G22	Ground		10.52834	76.210220	**UG**	XLPE					0
G22	G22-1	Ground		10.52809	76.209960	**UG**	XLPE					0
G22-1	G22-2	Ground		10.527890	76.209830	**UG**	XLPE					0
G20-2	AB4	ABL50705		10.526901	76.209650	**UG**	XLPE	300	1	213.31		213.31
AB4	AB5	ABL50706		10.526969	76.209495	**OH**	Racoon			13.28		13.28
AB5	G12-1	Ground		10.52695	76.20954	**UG**	XLPE	300	1			0
G12-1	G12	Ground		10.527281	76.209642	**UG**	XLPE					0
G12	RMU2, 16	RMU30702, Mukundha Apartment	LT	10.527293	76.209615	**UG**	XLPE	300	1	45.93	2	47.93
AB5	G12-1	Ground		10.52695	76.20954	**UG**	XLPE					
G12-1	G12	Ground		10.527281	76.209642	**UG**	XLPE					
G12	G12-2	Ground		10.52764	76.20974	**UG**	XLPE					
G12-2	P39	AB satyam		10.527662	76.209686	**UG**	XLPE	300	1	87.27		87.27

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P39	8	Satyam	LT	10.527851	76.209558	**UG**	XLPE	300	1	28.23	20	48.23
P39	LBS(G)	Ground(LBS)		10.527433	76.209679	**UG**	XLPE	300	1			0
LBS(G	12	Shivam	LT	10.527509	76.209558	**UG**	XLPE	300	1	39.37		39.37
AB4	P16	Post		10.526846	76.209493	**OH**	Racoon					0
P16	P16-1	Post		10.52664	76.20958	**OH**	Racoon					
P16-1	P17	Post		10.526361	76.209679	**OH**	Racoon					0
P17	P18	Post		10.525921	76.209726	**OH**	Racoon			122.07		122.07
P18	P40	AB sreehari		10.525945	76.209758	**OH**	Racoon			2.65		2.65
P40	9	Sree Hari	LT	10.525937	76.210051	**UG**	XLPE	240	1	32.08		32.08
P18	P19	Post		10.525819	76.209586	**OH**	Racoon					0
P19	P20	Post		10.524283	76.209863	**OH**	Racoon					0
P20	P20-1	Post		10.524239	76.209763	**OH**	Racoon			202.93		202.93
P20-1	13	Mannath Lane(NP Tower)	LT	10.524206	76.209846	**OH**	Racoon			6.58		6.58
P20-1	P41	AB-Ambika Arcades		10.523845	76.209846	**OH**	Racoon			42.71		42.71
P41	24	Ambika Arcades	LT	10.523921	76.209577	**UG**	XLPE	300	1	30.62	30	60.62
P41	P27	Post		10.523688	76.209783	**OH**	Racoon			18.6		18.6
P27	P45, 23	AB-MP, Music Park	LT	10.523625	76.209808	**OH**	Racoon			7.09		7.09
P27	P46	AB-Anamya Tower		10.523638	76.209755	**OH**	Racoon			6.55		6.55
P46	G19-1	Ground		10.52361	76.20962	**UG**	XLPE					0
G19-1	25	Anamya Tower	LT	10.523412	76.20964	**UG**	XLPE	300	1	37.27	15	52.27
P27	P28, 26	Post, Karuvan	LT	10.523523	76.209204	**OH**	Racoon			73.52		73.52
P27	G28-1	Ground		10.52357	76.2092	**UG**	XLPE					
G28-1	RMU4,30	RMU30703, Brahmasam Madom	LT	10.523343	76.209189	**UG**	XLPE	300	1	33.52	15	48.52
P28	AB6	ABI50504		10.523420	76.208130	**OH**	Racoon			110.55		110.55
P27	P21	Post		10.523664	76.209784	**OH**	Racoon			40.31		40.31

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P21	G20	Ground		10.523410	76.210170	**UG**	XLPE					
G20	P47	AB-Capital Heritage		10.523416	76.210200	**UG**	XLPE	300	1	38.79		38.79
P47	22	Capital Heritage	LT	10.523399	76.210428	**UG**	XLPE	300	1	11.61	15	26.61
P47	G20	Ground		10.523410	76.210170	**UG**	XLPE					
G20	G20-1	Ground		10.523190	76.2102	**UG**	XLPE					
G20-1	P48, AB7	AB-Temple Tree, ABL50707		10.523157	76.210224	**UG**	XLPE	300	1	31.55		31.55
P48	G21	Ground		10.52321	76.21048	**UG**	XLPE					
G21	21	Temple Tree	LT	10.522941	76.210513	**UG**	XLPE	300	1	57.72	30	87.72
AB7	AB8,P49	ABL50708, AB-Karthiayini1		10.523022	76.210176	**OH**	Racoon			15.83		15.83
P49	G14	Ground		10.522815	76.210240	**UG**	XLPE	300	1			0
G14	P50	AB-Karthiayini 2		10.522852	76.210672	**UG**	XLPE	300	1			0
P50	19	Karthiayini	LT	10.522676	76.210571	**UG**	XLPE	185	1	93.8	30	123.8
AB7	G15	Ground		10.522792	76.210359	**UG**	XLPE	300	1			0
G14	P51	AB-Leo Enterprises		10.523217	76.211669	**UG**	XLPE	300	1	200.51		200.51
P51	20	Leo Enterprises	HT	10.523058	76.211697	**UG**	XLPE	300	1	18.45	32	50.45
P51	P52	AB-Hall Mark		10.523250	76.211843	**OH**	ABC			18.02		18.02
P52	18	Cochin Hall Mark	HT	10.523162	76.211928	**UG**	XLPE	300	1	16.26	5	21.26
AB8	G14	Ground		10.522805	76.210311	**UG**	XLPE					
G14	G15	Ground		10.522792	76.210359	**UG**	XLPE					
G15	G16	Ground		10.522205	76.210385	**UG**	XLPE					
G16	G16-1	Ground		10.521597	76.210125	**UG**	XLPE					
G16-1	G16-2			10.52175	76.21023	**UG**	XLPE					
G16-2	G17			10.52158	76.21012	**UG**	XLPE					
G17	G18	Ground		10.521044	76.210204	**UG**	XLPE					

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
G18	G18-1			10.52115	76.21065	**UG**	XLPE					
G18-1	RMU5, 17	RMU30704, Thiruvambadi Devasm	HT	10.521188	76.211064	**UG**	XLPE	300	1	337.27		337.27
RMU5	27	Vrindavan Hotel	HT	10.521279	76.211033	**UG**	XLPE	300	1	10.62	40	50.62
AB5	AB9	AB Solaries		10.526980	76.209460	OH				4		4
AB9	G29	Ground		10.526387	76.209600	UG		300				
G29	G30	Ground		10.525814	76.208362	UG		300				
G30	G31	Ground		10.525557	76.208472	UG		300				
G31	G32	Ground		10.525548	76.208619	UG		300				
G32	G33	Ground		10.525292	76.208700	UG		300				
G33	RMU6	RMU Solaries		10.525306	76.208783	UG		300				
RMU6	32	Solaries Tr	LT	10.525382	76.208979	UG		300		311		311
P9	AB-Hospt	AB Pole		10.531123	76.212815	OH				18		18
AB-Hospt	G34	Ground		10.531163	76.212569	UG	XLPE	300				
G34	G35	Ground		10.531692	76.212628	UG	XLPE	300				
G35	31	Govt, Ayurveda Hospital	LT	10.531677	76.212493	UG	XLPE	300		100	5	105

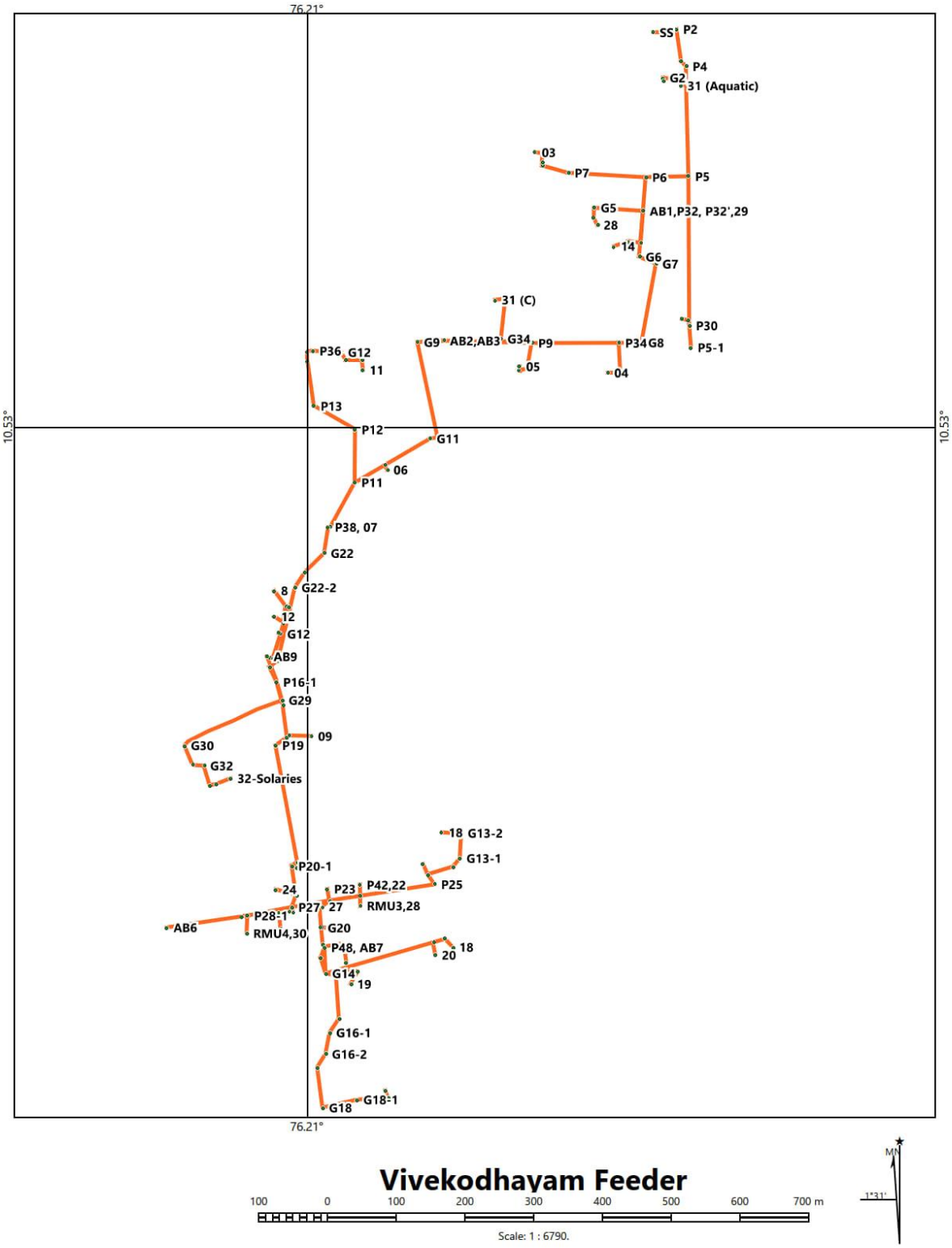

Figure 8: Vivekodayam feeder

8. BINI FEEDER

The following table shows the HT line distance of the 11 kV lines.

Table 22: HT line distance – Bini feeder

From Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
SS	2P	2P	10.535256	76.214482	**UG**	XLPE	300		10	10
2P	P1	Post	10.535166	76.214903	**UG**	XLPE	300	56.45	8	64.45
P1	P19	Post	10.531830	76.215107	**OH**	Racoon				0
P19	P2	Post	10.534960	76.215040	**OH**	Racoon		374.22		374.22
P2	RMU-30801	RMU-30801	10.531838	76.215015	**UG**	XLPE	300		10	10
RMU-30801	2	TT Devassy	10.531879	76.214960	**UG**	XLPE	300	18.02	2	20.02
P2	P3	Post	10.531335	76.215078	**OH**	Racoon				0
P3	P4	Post	10.531049	76.215114	**OH**	Racoon				0
P4	P5	Post	10.529577	76.214890	**OH**	Racoon		251.84		251.84
P5	P6	Post	10.529488	76.215092	**OH**	Racoon				0
P6	P20	Post	10.52926	76.21616	**OH**	Racoon				0
P20	P7,29	Vadakke chira	10.529356	76.216230	**OH**	Racoon		159.34		159.34
P7	P8	Post	10.529546	76.216378	**OH**	Racoon		26.45		26.45
P8	4	Lake View	10.529449	76.216594	**UG**	XLPE	300	25.78	5	30.78
P7	ABI-50802	ABI-50802	10.529068	76.216227	**OH**	Racoon				0
P7	P9	Post	10.528870	76.216152	**OH**	Racoon				0
P9	P10	Post	10.527645	76.215877	**OH**	Racoon		193.79		193.79
P10	5	Seethal Apartment	10.527505	76.216275	**UG**	XLPE	300	46.05	5	51.05
P10	P10-1	Post	10.527543	76.216062	**OH**	Racoon		22.6		22.6
P10-1	6	Kalyan Jewellers	10.527462	76.216232	**UG**	XLPE	240	21.37	50	71.37
P5	P11	Post	10.529458	76.214614	**OH**	Racoon		33.69		33.69
P11	P12	Post	10.529484	76.214194	**OH**	Racoon		46.27		46.27
P12	1	Mangala Tower	10.529553	76.214261	**UG**	XLPE	185	10.92	10	20.92
P12	P21	Post	10.52949	76.21346	**OH**	Racoon				0

From Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P21	P13	Post	10.529547	76.213178	**OH**	Racoon		111.57		111.57
P13	3	Paliyam Road	10.529485	76.213167	**OH**	Racoon		7.4		7.4
P13	P13-1	Post	10.529615	76.213168	**OH**	Racoon		7.6		7.6
P13-1	26	Ashiana Apartments	10.529910	76.213040	**UG**	XLPE	240	35.64	20	55.64
P11	P14	Post	10.529163	76.214639	**OH**	Racoon				0
P14	ABL-50803	ABL-50803	10.528369	76.214367	**OH**	Racoon		125.93		125.93
ABL-50803	10	Pallithammam	10.528262	76.213578	**UG**	XLPE	240	87.23	5	92.23
10	LBS,16	SBI- Pallithammam	10.528090	76.213650	**UG**	XLPE	185	20.13	2	22.13
LBS	12	Elite Supermarket (Pallithammam)	10.528137	76.213650	**UG**	XLPE	185	5.2	1	6.2
LBS	11	Pallithammam (Indoor)	10.528185	76.213651	**UG**	XLPE	185	5.31	10	15.31
10	LBS,14	LBS, Kairali Sree Theatre 2	10.528141	76.213761	**UG**	XLPE	240	12.99	3	15.99
LBS	13	Kairali Sree Theatre 1	10.528073	76.213925	**UG**	XLPE	240	19.46	35	54.46
ABL-50803	P15	Post	10.528289	76.214548	**OH**	Racoon		21.7		21.7
P15	RMU AGS, 7	RMU, AGS Office	10.528266	76.214609	**UG**	XLPE		7.15	8	15
P15	8	Cochin Dewasm Board	10.528197	76.214594	**OH**	Racoon		11.35		11.35
ABL-50803	P17	Post	10.528113	76.214334	**OH**	Racoon		28.55		28.55
P17	P16	Post	10.527645	76.214347	**OH**	Racoon				0
P16	P16-1	Post	10.527677	76.214684	**OH**	Racoon				0
P16-1	P16-2	Post	10.527742	76.215051	**OH**	Racoon		129.44		129.44
P16-2	9	Kailasam	10.527841	76.215127	**UG**	XLPE	300	14.11	28	42.11
P17	P16	Post	10.527645	76.214347	**OH**	Racoon		51.79		51.79
P16	P16-3	Post	10.527616	76.214282	**OH**	Racoon		7.8		7.8
P16-3	25	Bini Tourist Home	10.527769	76.214029	**UG**	XLPE	185	32.45	25	57.45
P17	G1	Ground	10.527570	76.214301	**UG**	XLPE	300		7	7
G1	G2	Ground	10.526835	76.212525	**UG**	XLPE	300			0
G2	24	Vegetable	10.527160	76.212504	**UG**	XLPE	300	303.92	5	308.92
24	G2				**UG**	XLPE				
G2	17	Dhanalakshmi Bank	10.52686	76.212190	**UG**	XLPE	300	74		74
24	P18	Post	10.527319	76.212319	**OH**	Racoon		26.71		26.71

From Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P18	15	Chemmannur	10.52732	76.212100	**UG**	XLPE	240	23.97	40	63.97
24	G2	Ground	10.526835	76.212525	**UG**	XLPE	300			0
G2	G3	Ground	10.526539	76.212193	**UG**	XLPE	300			0
G3	G4	Ground	10.526090	76.212030	**UG**	XLPE	300			0
G4	G5	Ground	10.524329	76.212023	**UG**	XLPE	300			0
G5	G6	Ground	10.524184	76.211864	**UG**	XLPE	300			0
G6	G7	Ground	10.524039	76.21133	**UG**	XLPE	300	438.02		438.02
G7	21	Naduvilal(Pooma)	10.523870	76.211293	**UG**	XLPE	300	15.66	6	21.66
21	20	Pooma Complex	10.523813	76.211424	**UG**	XLPE	150	15.66	15	30.66
P25-1	P25	Post	10.523930	76.21127	**OH**	Racoon		7.51		7.51
P25	P23	Post	10.523980	76.21168	**OH**	Racoon				0
P23	23, P23-1	Naduvial Shopping complex, Post	10.524120	76.21164	**OH**	Racoon		61.03		61.03
P23-1	19	Sidish Complex	10.52425	76.21153	**OH**	ABC		18.57		18.57
P23-1	G6	Ground	10.524184	76.211864	**UG**	XLPE	300			
G6	G5	Ground	10.524329	76.212023	**UG**	XLPE	300			
G5	G8	Ground	10.52468	76.212010	**UG**	XLPE	300			
G8	AB-Ayodhya	AB	10.52466	76.211960	**UG**	XLPE	300	92.68		92.68
AB-Ayodhya	18	Ayodhya centre	10.52467	76.211780	**UG**	XLPE	150	20.72	12	32.72
P25	P24	Post	10.52383	76.21069	**OH**	Racoon		65.54		65.54
P24	AB-Chungath	AB	10.52398	76.21069	**OH**	Racoon		17.39		17.39
AB-Chungath	22	P22,Chugath Jewellery	10.52398	76.21069	**UG**	XLPE	300		10	10
P24	RMU-30802, 28	RMU-30802, National Lodge	10.5237	76.21069	**UG**	XLPE	300	13.75	35	48.75
P24	P26	Post	10.52377	76.21028	**OH**	Racoon		45.37		45.37
P26	27	Maheswari Apartment	10.52369	76.210190	**UG**	XLPE	300	12.47	17	29.47

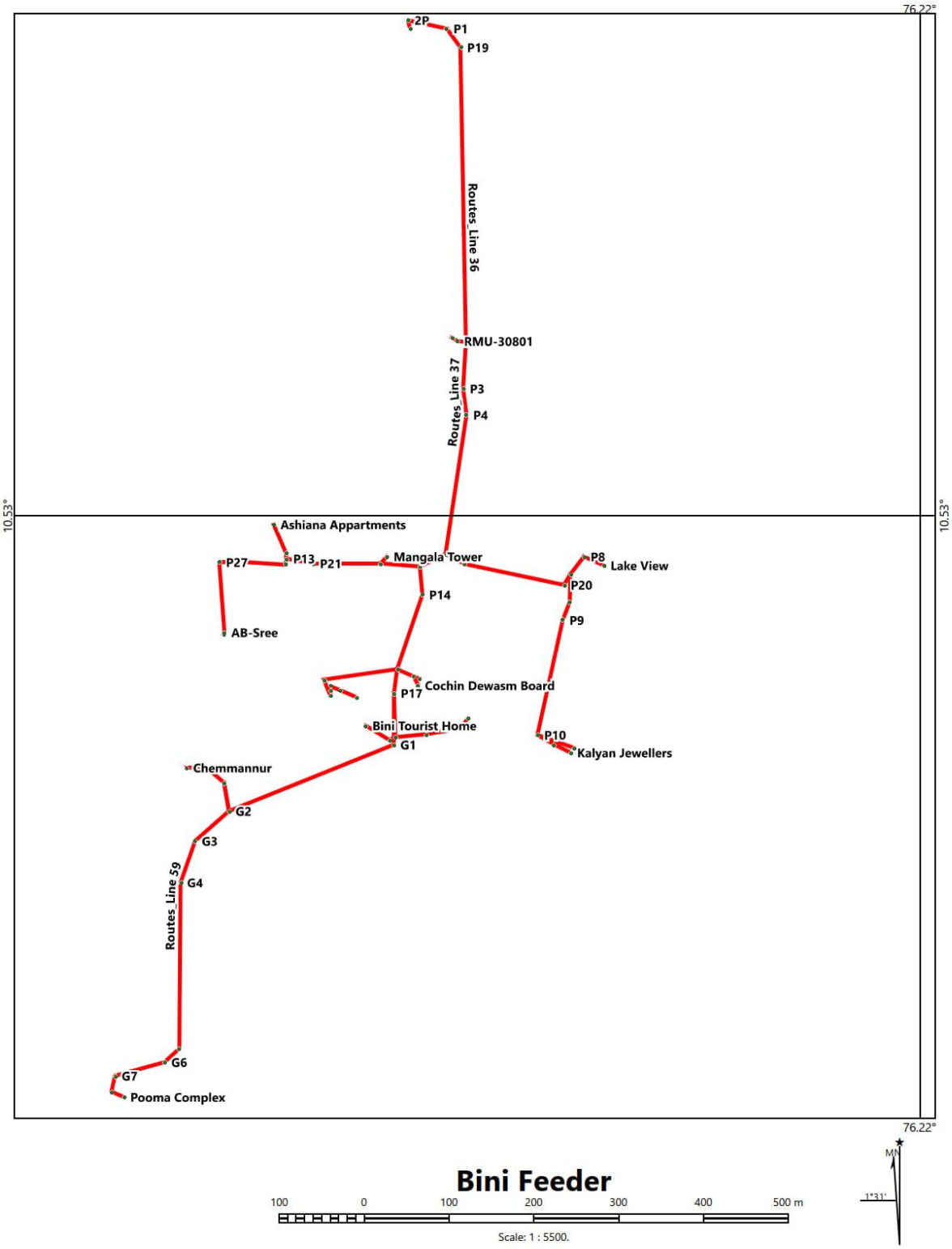

Figure 9: Bini feeder

9. ***POONKUNAM FEEDER***

The following table shows the 11-kV line distance in the Poonkunam feeder

Table 23: HT line distance – Poonkunam Feeder

From Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
	ss	Substation Feeder	10.535157	76.214636						
SS	2P	Post	10.535272	76.214564	**UG**	XLPE	300			
2P	AB1	ABL50902, ABI50903	10.535345	76.209502	**UG**	XLPE	300			
AB1	AB2	ABl50904	10.535358	76.208746	**UG**	XLPE	300	678	5	683
AB2	G1	Ground	10.535476	76.208639	**UG**	XLPE	300			
G1	01, AB4	Omega Swami Saranam, ABL 50905	10.536126	76.208427	**UG**	XLPE	300	93	5	98
ABL4	RMU1, 28	Sarong Homes Apartment, RMU30901	10.536473	76.208404	**UG**	XLPE	300	98		98
RMU1	G2	Ground	10.536492	76.208432	**UG**	XLPE	300	4		4
G2	G3	Ground	10.536125	76.208450	**UG**	XLPE	300	41		41
G3	RMU2	RMU30902	10.536110	76.207299	**UG**	XLPE	300	130		130
RMU2	31	Pallissery Apartment	10.535922	76.207287	**UG**	XLPE	300	21		21
AB2	AB3	ABl50906	10.535331	76.208117	**OH**	Racoon		69		69
AB3	P1	Post	10.535337	76.207504	**OH**	Racoon		67		67
P1	2	Classic Park	10.535526	76.207404	**OH**	Racoon		25		25
P1	P2	Post	10.535304	76.206774	**OH**	Racoon		80		80
P2	P2-1	AB-Falkland Square	10.535254	76.206772	**OH**	Racoon		6		6
P2-1	25	Falkland Square	10.535232	76.206838	**UG**	XLPE	300	33		33
P2	P3	Post	10.536618	76.206981	**OH**	Racoon		147		147
P3	P3-1	AB-Inland	10.536831	76.207147	**UG**	XLPE	300	35		35
P3-1	21	Westend Krishna Apartment	10.536820	76.207213	**UG**	XLPE	300	60		60
P2	P4	Post	10.535243	76.206020	**OH**	Racoon		83		83
P4	P4-1	AB-Capital	10.535454	76.205994	**OH**	Racoon		24		24
P4-1	3	Capital Harmony	10.535525	76.206123	**UG**	XLPE	185	51		51
P4	P5, ABL5	Post,ABL-50907	10.535254	76.205839	**OH**	Racoon		20		20
P5	P5-1	AB-Omega	10.535439	76.205829	**OH**	Racoon		20		20
P5-1	4	Omega Crown	10.535629	76.205702	**UG**	XLPE	150	75		75
P5	5	Ramadevi-1	10.535208	76.205801	**UG**	XLPE	300	32		32
P5	RMU3	RMU-30903	10.535207	76.205801	**UG**	XLPE	300	27		27
RMU3	29	Aricaria Jyothi Nest Apartment	10.535158	76.205617	**UG**	XLPE	300	82		82
P5	P6	Post	10.535264	76.204846	**OH**	Racoon		109		109
P6	P7	AB-Ephta	10.535643	76.204863	**OH**	Racoon		44		44
P7	RMU4	RMU-30904	10.535526	76.204854	**UG**	XLPE	300	51		51
RMU4	32	Ephatha	10.5356289	76.204669	**UG**	XLPE	185	73		73
P7	6	Lakshmi Apartment	10.535965	76.204842	**OH**	Racoon		39		39
P6	P8	Post	10.535254	76.204113	**OH**	Racoon		80		80
P8	P8-1	AB-Kalyan	10.535333	76.204113	**OH**	Racoon		9		9
P8-1	7	Kalyan	10.535955	76.204283	**UG**	XLPE	300	91		91
P8	P9	Post	10.535229	76.203339	**OH**	Racoon		85		85
P9	8	Sitaram Mill	10.535476	76.203305	**OH**	Racoon		28		28
8	AB6	ABL-50908	10.535485	76.203321	**OH**	Racoon		2		2
AB6	9	Dhanalaxmi Office	10.535641	76.202980	**UG**	XLPE	300	54		54
AB6	RMU5	RMU-30905	10.537322	76.203749	**UG**	XLPE	300	244		244
RMU5	27	Gulmohar Apartment	10.537170	76.203781	**UG**	XLPE	150	17		17
RMU5	RMU6	RMU-30906	10.538101	76.203319	**UG**	XLPE	300	134		134

From Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
RMU6	30	Ground Water	10.538101	76.203319	**UG**	XLPE	300		10	10
RMU6	G4	Ground	10.538531	76.203326	**UG**	XLPE	300			
G4	G7	Ground	10.53903	76.20271	**UG**	XLPE	300			
G7	AB7	ABL-50912	10.538397	76.202109	**UG**	XLPE	300	314	10	324
AB7	RMU7	RMU-30907	10.538407	76.202027	**UG**	XLPE	300	9	5	14
RMU7	33	SreeRam Temple	10.538407	76.202027	**UG**	XLPE	300		10	10
RMU7	RMU8	RMU-30908	10.538041	76.202094	**UG**	XLPE	300	49		49
RMU8	34	Top Tulip	10.537873	76.202005	**UG**	XLPE	300	29		29
AB7	12	Ram Nikethan	10.538360	76.202494	**UG**	XLPE	300	60		60
P9	P10	Post	10.535232	76.202978	**OH**	Racoon				-
P10	AB8	ABl-50909	10.535048	76.202957	**OH**	Racoon		60		60
AB8	P10-1	AB-Sree Sailam	10.534688	76.203694	**OH**	Racoon		90		90
P10-1	10	Sree Sailam	10.534067	76.203037	**UG**	XLPE	300	130		130
AB8	P11	Post	10.535057	76.201372	**UG**	XLPE	300	183	10	193
P11	AB9	ABL-50913	10.535326	76.201445	**OH**	Racoon		31		31
AB9	AB10	ABL-50190	10.535455	76.2014455	**OH**	Racoon		14		14
AB10	RMU10	RMU-30910	10.535455	76.201382	**UG**	XLPE	300	7		7
RMU10	37	Sayooj Haridas	10.535620	76.201270	**UG**	XLPE	185	33		33
AB10	P11-1	AB-Neelambari	10.536391	76.201307	**OH**	Racoon		105		105
P11-1	22	Neelambari Apartment	10.536426	76.201412	**UG**	XLPE	300	12		12
P11-1	P11-2	AB-Capital Horizon	10.536946	76.201169	**OH**	Racoon		63		63
P11-2	11	Capital Horizon	10.537095	76.201838	**UG**	XLPE	300	97		97
P11-2	P12	Post	10.537055	76.201185	**OH**	Racoon		12		12
P12	26	Ramachandra Apartment	10.537054	76.201158	**OH**	Racoon		3		3
P12	P13	Post	10.538293	76.201026	**OH**	Racoon		126		126
P13	RMU13	RMU-Hanuman Statue	10.538644	76.200985	**UG**	XLPE	300	39		39
RMU13	13	Pushpagiri	10.538662	76.201049	**UG**	XLPE	300	7		7
RMU13	14	Vijay Sai	10.537736	76.200734	**UG**	XLPE	150	104		104
RMU13	G9	Ground	10.539111	76.201148	**UG**	XLPE	300			
G9	G10	Ground	10.539146	76.201389	**UG**	XLPE	300			
G10	G11	Ground	10.539852	76.201437	**UG**	XLPE	300			
G11	G12	Ground	10.540326	76.201436	**UG**	XLPE	300			
G12	RMU9	RMU30909	10.540342	76.201309	**UG**	XLPE	300	227		227
RMU9	35	Krishna Saketh	10.540339	76.201276	**UG**	XLPE	300	4	10	14
AB9	P14	Post	10.535622	76.200737	**OH**	Racoon				-
P14	P15	Post	10.536081	76.200141	**OH**	Racoon		167		167
P15	P15-1	AB-Capital Garden	10.536045	76.200017	**OH**	Racoon		19		19
P15-1	15	Capital Garden	10.535728	76.199796	**UG**	XLPE	150	43	7	50
P15	P15-2	AB-Asset	10.536252	76.199975	**OH**	Racoon		27		27
P15-2	23	Asset Mid Town Poonkunnam	10.535524	76.199172	**UG**	XLPE	300	138	13	151
P15-2	RMU11	RMU-30911	10.536403	76.199537	**UG**	XLPE	300			
RMU11	36	SAFA Tower	10.536403	76.199537	**UG**	XLPE	300	63	16	79
P11	P11-3	AB-Dhanalaxmi	10.535035	76.201303	**OH**	Racoon		7		7
P11-3	RMU12	RMU-30912	10.534944	76.201292	**UG**	XLPE	300	11		11
RMU12	38	Dhanalakshmi Bank	10.534944	76.201292	**UG**	XLPE	300		10	10
P11	P16	ABL	10.534466	76.201393	**OH**	Racoon		65		65
P16	P16-1	ABL Capital Village	10.53452	76.199145	**UG**	XLPE	300	324		324
P16-1	16	Capital Village	10.534929	76.199266	**UG**	XLPE	300	47	10	57
P16	17	Ushas	10.534124	76.201454	**OH**	Racoon		38		38

From Map no	Map no	Pole/transformer/ AB	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
17	P17	Post	10.533884	76.201471	**OH**	Racoon		27		27
P17	18	Palissery Tower	10.53385	76.2017	**OH**	Racoon		25		25
P17	P18	Post	10.532924	76.201467	**OH**	Racoon		106		106
P18	P18-1	AB Kingsway	10.532924	76.201735	**OH**	Racoon		29		29
P18-1	19	Kingsway	10.532927	76.202019	**UG**	XLPE	300	31	30	61
P18	P19	AB Vincent Tower	10.532287	76.201529	**OH**	Racoon		71		71
P19	24	Vincent Tower	10.532218	76.201449	**UG**	XLPE	185	12	30	42
P19	P19-1	AB Cheloor	10.531996	76.201557	**OH**	Racoon		28		28
P19-1	20	Cheloor Apartment	10.531784	76.201361	**UG**	XLPE	185	47	50	97
P19-1	AB11	ABI-50914	10.531759	76.201555	**OH**	Racoon		45		45
AB3	RMU-30913	RMU-30913	10.535267	76.208106	UG	XLPE	300	10	5	15
RMU-30913	10939	CIDBI CANDOR	10.534883	76.208043	UG	XLPE	185	43	7	50
P5/ABL-5	P5-1	Post	10.535292	76.205173	OH	Racoon		74		74
P5-1	RMU-30914	RMU-30914	10.535468	76.205538	UG	XLPE	300	44		44
RMU-30914	10940	FORUS GAZANIA APARTMENTS	10.535738	76.205470	UG	XLPE	185	32		32
AB10	P11-A	Post	10.536064	76.201342	OH	Racoon		70		70
P11-A	RMU-30915	RMU-30915	10.536062	76.201321	UG	XLPE	300	3	3	6
RMU-30915	10941	LAKSHMI NIVAS	10.536062	76.201321	UG	XLPE	300		24	24

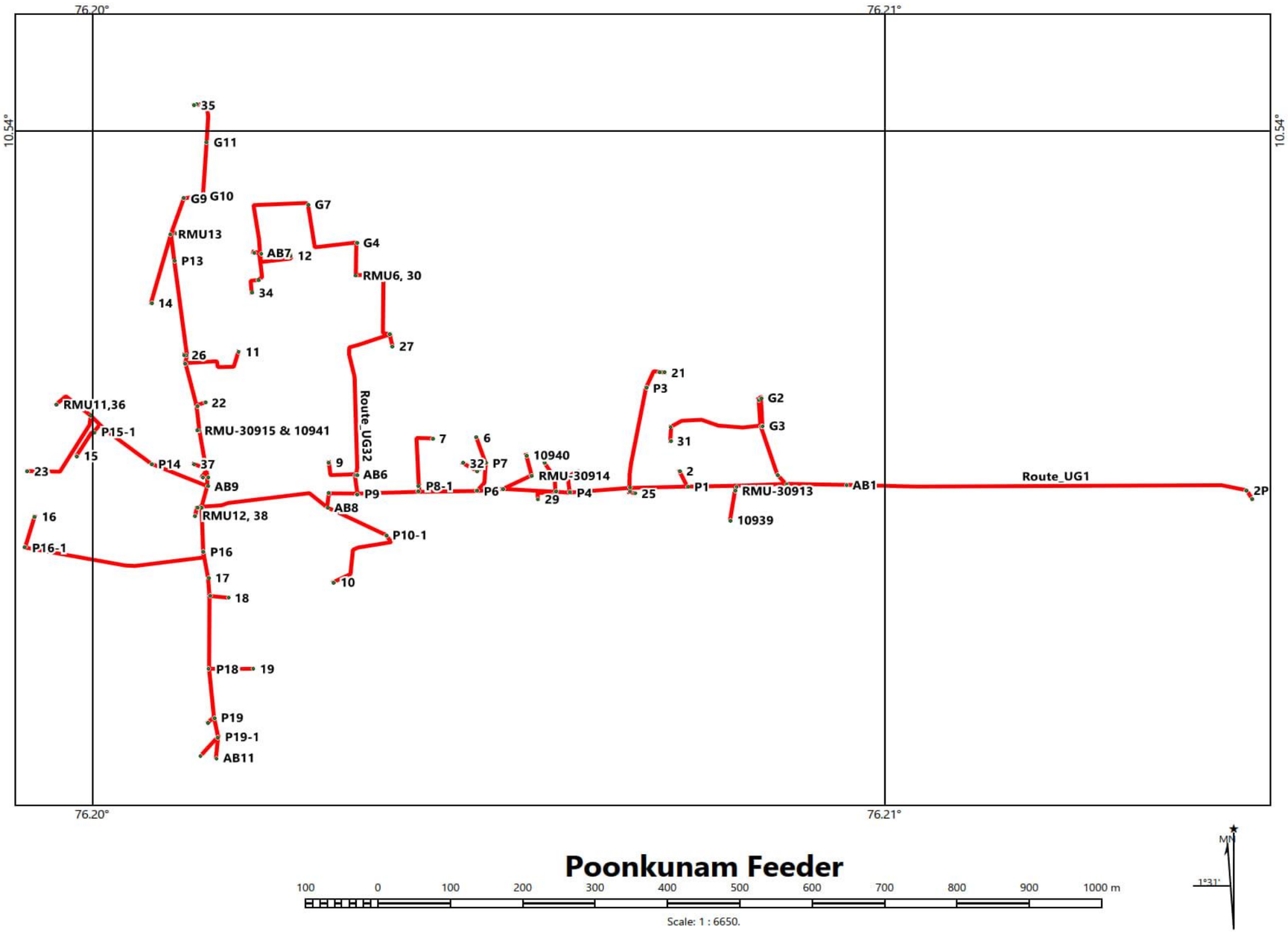

Figure 10: Poonkunam feeder

10. KERALAVARMA FEEDER

The following table shows the 11-kV line distance in the Keralavarma feeder

Table 24: HT line distance –Keralavarma feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
	S-S	Substation		10.535170	76.214550							
SS	2P	post		10.535273	76.214431	**UG**	XLPE	300	1		10	10
2P	G1	Ground		10.535321	76.214428	**UG**	XLPE	300	1			
G1	G2	Ground		10.535355	76.211746	**UG**	XLPE	300	1			
G2	G3	Ground		10.535278	76.211385	**UG**	XLPE	300	1			
G3	G4	Ground		10.535441	76.211058	**UG**	XLPE	300	1		3	3
G4	G5	Ground		10.535456	76.2083	**UG**	XLPE	300	1		2	2
G5	G6	Ground		10.535456	76.208774	**UG**	XLPE	300	1			
G6	P1	post		10.535296	76.208826	**UG**	XLPE	300	1		5	5
P1	G7	Ground		10.534716	76.208730	**UG**	XLPE	300	1			
G7	P2	post		10.534159	76.208607	**UG**	XLPE	300	1		3	3
P2	G8	Ground		10.533560	76.208529	**UG**	XLPE	300	1			
G8	G9	Ground		10.533887	76.206057	**UG**	XLPE	300	1			
G9	G10	Ground		10.534050	76.205080	**UG**	XLPE	300	1			
G10	RMU31001	RMU31001		10.533613	76.20502	**UG**	XLPE	300	1			
RMU31001	G11	Ground		10.533568	76.204931	**UG**	XLPE	300	1			
G11	G12	Ground		10.533644	76.202802	**UG**	XLPE	300	1			
G12	G13	Ground		10.533517	76.202757	**UG**	XLPE	300	1			
G13	G14	Ground		10.533178	76.202847	**UG**	XLPE	300	1			
G14	G15	Ground		10.532570	76.203092	**UG**	XLPE	300	1			
G15	G16	Ground		10.532547	76.203424	**UG**	XLPE	300	1			
G16	G17	Ground		10.531540	76.203547	**UG**	XLPE	300	1			
G17	RMU31002	RMU31002		10.531752	76.201493	**UG**	XLPE	300	1		5	5
RMU31002	ABL51002	ABL51002, ABI50914		10.531832	76.201586	**UG**	XLPE	300	1	2052.75	5	2057.75
ABL51002	P3	post		10.531583	76.201615	**OH**	Racoon			27.72		27.72
P3	G18	Ground		10.531674	76.201509	**UG**	XLPE	300	1			
G18	G19	Ground		10.531656	76.200733	**UG**	XLPE	300	1	27.72		27.72
G19	ABL51003	ABL51003		10.531623	76.200701	**UG**	XLPE	300	1	108.74	3	111.74
ABL51003	1	Omega genting palace	LT	10.531660	76.200679	**UG**	XLPE	240	1	4.75	30	34.75
ABL51003	P3-1	post		10.531660	76.200679	**OH**	Racoon			4.75		4.75
P3-1	P3-2	post		10.531755	76.20052	**UG**	XLPE	300	1	20.33		20.33
P3-2	2	CIDBI	LT	10.532144	76.200547	**UG**	XLPE	185	1	43.13	30	73.13
P3-1	P3-3	post		10.531666	76.200055	**UG**	XLPE	300	1	68.3		68.3
P3-3	3	Sreesankari	LT	10.532120	76.200172	**UG**	XLPE	240	1	51.82		51.82
P3	P4	post		10.531031	76.201756	**OH**	Racoon					
P4	P5	post		10.530401	76.201802	**OH**	Racoon			132.84		132.84
P5	RMU,37	Zudio	LT	10.530508	76.20192	**UG**	XLPE	185	1	17.52	7	24.52

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
RMU Zudio	RMU TM tower	RMU		10.530858	76.202006	UG	XLPE	300				
RMU TM tower	TM Towers	T M Tower-Transformer		10.530853	76.202041	UG	XLPE	300		55	11	66
P5	P6	post		10.530007	76.201851	**OH**	Racoon			43.91		43.91
P6	RMU31003,34	MC TOWER	LT	10.529942	76.202264	**UG**	XLPE	300	1	45.77	4	49.77
P6	P7	post		10.529175	76.201897	**OH**	Racoon			92.28		92.28
P7	P7-1	post		10.529238	76.202011	**OH**	Racoon			14.29		14.29
P7-1	4	CA arcade	LT	10.529465	76.202074	**UG**	XLPE	240	1	26.04	10	36.04
P7	ABL51004	ABL51004		10.528715	76.20191	**OH**	Racoon			50.9		50.9
ABL51004	25	falkland	LT	10.528476	76.202179	**UG**	XLPE	300	1	50.53	10	60.53
P7	P8	post		10.528516	76.201906	**OH**	Racoon			22.02		22.02
P8	RMU31004	RMU		10.528547	76.20182	**UG**	XLPE	300	1			
RMU31004	27	chirang Apartment	LT	10.528627	76.201409	**UG**	XLPE	300	1	55.87	3	58.87
P8	P9	post		10.528181	76.20196	**OH**	Racoon					
P9	P10	post		10.527614	76.201998	**OH**	Racoon			100.38		100.38
P10	P10-1	post		10.527568	76.202117	**OH**	Racoon			13.98		13.98
P10-1	P10-2	post		10.527451	76.202367	**UG**	XLPE	300		30.96	6	36.96
P10-2	5	Coral Apartment	LT	10.527455	76.202467	**UG**	XLPE	185	1	10.95	8	18.95
P10	P11,6	Kerala Varma Bus stop	LT	10.527363	76.201997	**OH**	Racoon			27.76	3	30.76
P11	ABL51005	ABL51005		10.527208	76.201618	**OH**	Racoon					
ABL51005	P12	post		10.527178	76.201078	**OH**	Racoon					
P12	P13	post		10.527310	76.200046	**OH**	Racoon			217.99		217.99
P13	RMU31005	RMU31005		10.527402	76.20003	**UG**	XLPE	300	1	10.33	5	15.33
RMU31005	31	Palaise Grande App	LT	10.527763	76.199901	**UG**	XLPE	150	1	53.91	20	73.91
P13	7	Kerala Varma Hostel	LT	10.527503	76.198852	**OH**	Racoon			132.42		132.42
7	P14	post		10.527591	76.198841	**OH**	Racoon					
P14	P15	post		10.528925	76.199064	**OH**	Racoon					
P15	P16	post		10.529118	76.198656	**OH**	Racoon			214.61		214.61
P16	P16-1	post		10.529044	76.198722	**OH**	Racoon			11.52		11.52
P16-1	9	Temple Tower	LT	10.528974	76.198634	**UG**	XLPE	185	1	12.36	50	62.36
P16	P17	post		10.529191	76.198272	**OH**	Racoon					
P17	P18	post		10.529810	76.19877	**OH**	Racoon					
P18	P19	post		10.530158	76.198865	**OH**	Racoon			168.65		168.65
P19	10	Mahamaya App	LT	10.530146	76.198903	**OH**	Racoon			3.79		3.79
P19	ABL57007	ABL57007		10.530292	76.198939	**OH**	Racoon			16.06		16.06
ABL57007	11	Sreedurga App	LT	10.530169	76.197773	**UG**	XLPE	300	1	139.82	3	142.82
11	P20	post		10.530245	76.197214	**OH**	Racoon			63.56		63.56
P20	P20-1	post		10.530012	76.197097	**UG**	XLPE	300	1	35.54	3	38.54
P20-1	12	Blue Hills	LT	10.529952	76.197095	**UG**	XLPE	185	1	6.64	25	31.64
7	RMU31006, 30	Capital Green App	LT	10.527630	76.198371	**UG**	XLPE	300	1	54.49	50	104.49
RMU31006	RMU31007	RMU31007		10.527821	76.197864	**UG**	XLPE	300	1	59.38		59.38

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
RMU31007	32	Forus	LT	10.527645	76.197919	**UG**	XLPE	150	1	20.38	10	30.38
7	G20	Ground		10.527928	76.19761	**UG**	XLPE	300	1			
G20	G21	Ground		10.529028	76.196268	**UG**	XLPE	300	1			
G21	G22	Ground		10.528845	76.196066	**UG**	XLPE	300	1			
G22	G23	Ground		10.528300	76.195804	**UG**	XLPE	300	1			
G23	ABL51009, 09	Kerala Varma	LT	10.528325	76.195724	**UG**	XLPE	300	1	441.91		441.91
ABL51009	G24	Ground		10.528316	76.195396	**UG**	XLPE	300	1			
G24	G25	Ground		10.528107	76.19512	**UG**	XLPE	300	1			
G25	G26	Ground		10.527212	76.194933	**UG**	XLPE	300	1			
G26	G27	Ground		10.525713	76.195284	**UG**	XLPE	300	1			
G27	G28	Ground		10.525824	76.195593	**UG**	XLPE	300	1			
G28	G29	Ground		10.525274	76.195974	**UG**	XLPE	300	1			
G29	G30	Ground		10.524536	76.196625	**UG**	XLPE	300	1			
G30	G31	Ground		10.523815	76.197061	**UG**	XLPE	300	1			
G31	22	Chungam	LT	10.522532	76.197060	**UG**	XLPE	300	1	803.93		803.93
22	P21	Post		10.521655	76.197131	**OH**	Racoon					
P21	35	Model Road	LT	10.521872	76.19881	**OH**	Racoon			285.88		285.88
35	G32	Ground		10.522016	76.198822	**UG**	XLPE	300	1			
G32	21	Central Park	LT	10.522294	76.198713	**UG**	XLPE	300	1	60.46	10	70.46
P11	P22	post		10.526862	76.202089	**OH**	Racoon					
P22	P23	post		10.526415	76.202184	**OH**	Racoon					
P23	P24	post		10.526066	76.202263	**OH**	Racoon					
P24	ABL51012	ABL51012		10.526051	76.202096	**OH**	Racoon			148.25		148.25
ABL51012	G33	Ground		10.526074	76.202315	**UG**	XLPE	300	1			
G33	G34	Ground		10.525730	76.202417	**UG**	XLPE	300	1			
G34	interlink	interlink post		10.526188	76.203761	**UG**	XLPE	300	1	225.69		225.69
ABL51012	ABL51015	ABL51015		10.525713	76.202148	**OH**	Racoon			37.82		37.82
ABL51015	P25	post		10.525741	76.201921	**OH**	Racoon					
P25	P26	post		10.525771	76.201614	**OH**	Racoon			58.81		58.81
P26	13	NP Tower	LT	10.525840	76.201408	**OH**	Racoon			23.81		23.81
P26	P27	post		10.525817	76.201075	**OH**	Racoon			59.22		59.22
P27	P27-1	post		10.525773	76.20105	**OH**	Racoon			5.58		5.58
P27-1	15	Capital Symphony	LT	10.525637	76.201109	**UG**	XLPE	300	1	16.37	20	36.37
P27	P28	post		10.525852	76.200729	**OH**	Racoon			38.07		38.07
P28	14	Bhadra App	LT	10.525886	76.200621	**UG**	XLPE	150	1	12.41	40	52.41
ABL51015	24	Bindhu Theatre	LT	10.524793	76.202208	**UG**	XLPE	300	1	101.97	10	111.97
24	RMU31008	RMU31008		10.524722	76.201983	**UG**	XLPE	300	1		10	10
RMU31008	33	Ansari Complex	LT	10.524792	76.201871	**UG**	XLPE	300	1	40.35		40.35
24	P29	post		10.524095	76.202237	**UG**	XLPE	300	1	77.27	10	87.27
P29	P29-1	post		10.524079	76.202011	**UG**	ABC			22.99		22.99
P29-1	16	Westfort Hospital	HT	10.524132	76.201775	**UG**	XLPE	300	1	28.02	5	33.02
P29	P30	post		10.523434	76.202214	**OH**	Racoon			73.16		73.16
P30	17	Haya Tower	LT	10.523369	76.201730	**UG**	XLPE	300	1	53.46		53.46

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P30	P31	post		10.522859	76.20223	**OH**	Racoon					
P31	ABL51017	ABL51017		10.522849	76.202314	**OH**	Racoon					
ABL51017	P32	post		10.522568	76.202344	**OH**	Racoon			104.14		104.14
P32	P32-1	post		10.522565	76.202482	**OH**	Racoon			15.11		15.11
P32-1	29	Jyothi Tower	LT	10.52272	76.202394	**UG**	XLPE	300	1	19.67	16	35.67
P32	P33	post		10.522264	76.202388	**OH**	Racoon					
P33	18	Westfort	LT	10.522170	76.202276	**OH**	Racoon			50.04		50.04
18	P34	post		10.521989	76.202110	**OH**	Racoon			27.04		27.04
P34	P34-1	post		10.521962	76.202223	**OH**	Racoon					
P34-1	ABL51018	ABL51018		10.521754	76.202236	**OH**	Racoon			35.78		35.78
ABL51018	G35	Ground		10.522013	76.202211	**UG**	XLPE	300	1			
G35	RMU31009	RMU31009		10.522180	76.201763	**UG**	XLPE	300	1		15	15
RMU31009	26	PV Arcade	LT	10.522630	76.2019	**UG**	XLPE	300	1	133.17	15	148.17
ABL51018	P34-2	post		10.521698	76.202191	**OH**	Racoon			7.91		7.91
P34-2	23	TipTop	HT	10.521642	76.202055	**UG**	XLPE	185	1	16.12	20	36.12
ABL51018	P39	post		10.520272	76.202306	**OH**	Racoon					
P39	P40	post		10.519783	76.20243	**OH**	Racoon					
P40	P41	post		10.519296	76.202584	**OH**	Racoon					
P41	P42	post		10.518333	76.202673	**OH**	Racoon					
P42	19	Calvary	LT	10.517971	76.202628	**OH**	Racoon			423.08		423.08
P34	interlink	Interlink		10.521759	76.201829	**OH**	Racoon			39.92		39.92
P34	P35	post		10.522017	76.201874	**OH**	Racoon					
P35	P36	post		10.522245	76.201772	**OH**	Racoon					
P36	P37	post		10.522194	76.201273	**OH**	Racoon					
P37	P38	post		10.522378	76.201250	**OH**	Racoon			122.36		122.36
P38	20	Westfort Tower	LT	10.522547	76.201335	**UG**	XLPE	185	1	27.75		27.75
P38	G36	Ground		10.522273	76.200862	**UG**	XLPE	300	1			
G36	RMU31010	RMU31010		10.522309	76.200842	**UG**	XLPE	300	1	46.1		46.1
RMU31010	28	Chowallur Tower	LT	10.522631	76.201078	**UG**	XLPE	300	1	44	20	64
RMU31010	G37	Ground		10.522122	76.200852	**UG**	XLPE	300	1			
G37	RMU31011	RMU31011		10.522047	76.200636	**UG**	XLPE	300	1			
RMU31011	36	Puthenpurakal Tower	LT	10.521984	76.200575	**UG**	XLPE	300	1	62.35	10	72.35
RMU31009	RMU PV, 40	PV Tower (PV ARCADES), Kalyan 999 Westfort	LT	10.522553	76.201711	UG	XLPE	300			42	42
ABL51018	AB alm	AB (INFRONT OF ALMUQKDIR) KERALA VARMA		10.521128	76.202279	OH				70		70
ABalm	RMUalm	RMU ALMUQTADIR		10.521117	76.202239	UG	XLPE	300				
RMUalm	39	Adarsh Tower , 250 kVA	HT	10.521138	76.201976	UG	XLPE	300		33	5	38
P3-3	P43	Post		10.531640	76.199780	UG	XLPE	300				
P43	G38	POST		10.531654	76.199472	UG	XLPE	300				
G38	G39			10.530770	76.198942	UG	XLPE	300				
G39	G40			10.530474	76.199010	UG	XLPE	300				
G40	AB	AB57007		10.530214	76.198938	UG	XLPE	300		234	54	288

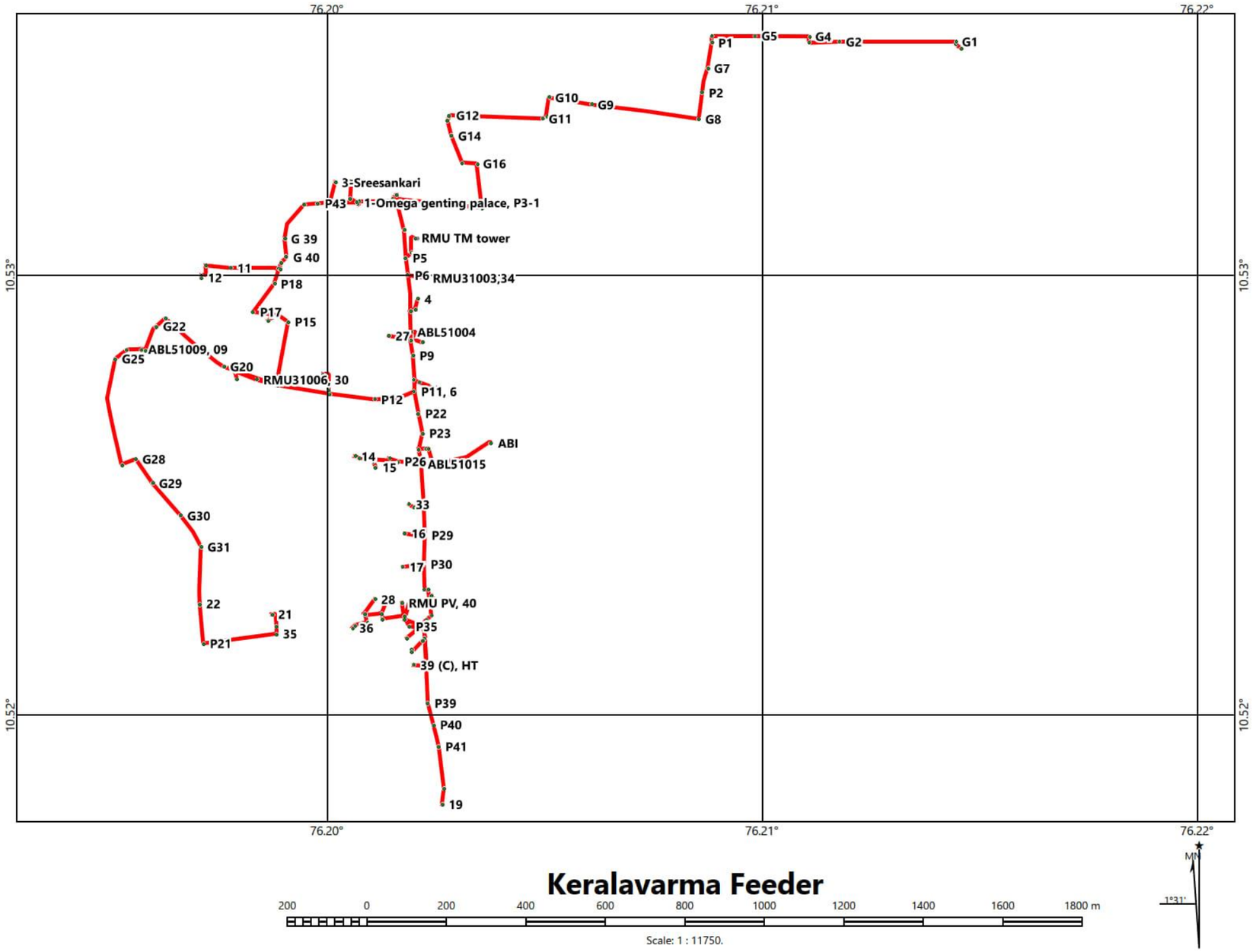

Figure 11: Keralavarma feeder

11. RAMANILAYAM FEEDER

The following table shows the 11-kV line distance in the Ramanilayam feeder.

Table 25: HT line distance – Ramanilayam feeder

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
	S-S	Substation feeder		10.535182	76.21455						
S-S	P1	Post		10.535115	76.214826	**UG**	XLPE	300		37	37
P1	P2	Post		10.534981	76.215004	**UG**	XLPE	300	10	15	25
P2	ABL51102	ABl51102		10.534982	76.215185	**OH**	Racoon				0
ABL51102	P3	Post		10.533549	76.215227	**OH**	Racoon				0
P3	P4	Post		10.53397	76.215342	**OH**	Racoon		202.2		202.2
P4	1	Stadium West	LT	10.533257	76.215292	**OH**	Racoon		10.33		10.33
P4	P5	Post		10.533420	76.215841	**OH**	Racoon				
P5	P6	Post		10.533401	76.216003	**OH**	Racoon				
P6	P7	Post		10.533325	76.216275	**OH**	Racoon				
P7	P8	Post		10.532954	76.216447	**OH**	Racoon				
P8	2, ABL51103	Stadium East	LT	10.532928	76.21671	**OH**	Racoon		189.16		189.16
ABL51103	G1	Ground		10.532945	76.216659	**UG**	XLPE	300			0
G1	23	Indoor Stadium	HT	10.532891	76.216673	**UG**	XLPE	300		10.02	10.02
ABL51103	G2	Ground		10.532986	76.217108	**UG**	XLPE	300			0
G2	P9	Post		10.531025	76.217042	**UG**	XLPE	300		192.4	192.4
P9	P10	Post		10.530901	76.217115	**OH**	Racoon				0
P10	P11	Post		10.530852	76.217868	**OH**	Racoon			96.89	96.89
P11	ABL51104	ABL51104		10.530848	76.218143	**OH**	Racoon				0
ABL51104	P12	Post		10.530847	76.218303	**OH**	Racoon			49.2	49.2
P12	AB Ramanilayam	AB		10.531074	76.2183	**OH**	Racoon				0

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB Ramanilayam	3	Ramanilayam	LT	10.531143	76.218297	**OH**	Racoon			32.75	32.75
P12	ABI51105	ABI51105		10.530836	76.218591	**OH**	Racoon			12.47	12.47
P11	ABL51106	ABL51106		10.529097	76.217916	**OH**	Racoon		196.57		196.57
ABL51106	AB Pulimoottil	AB		10.529117	76.217892	**OH**	Racoon		3.43		3.43
AB Pulimoottil	4	Pulimoottil	HT	10.529174	76.217798	**UG**	XLPE	300	12.7	25	37.7
ABL51106	P13	Post		10.528838	76.217967	**OH**	Racoon		29.19		29.19
P13	AB Kaliyath, Chungath	AB		10.528519	76.218008	**OH**	Racoon		35.26		35.26
AB Chungath	11	Chungath Jewellery	HT	10.528557	76.217719	**UG**	XLPE	150	30.29	20	50.29
AB Kaliyath	10	Kaliyath	LT	10.528383	76.217532	**UG**	XLPE	150	52.72		52.72
AB Kaliyath	AB-YMCA	AB		10.528555	76.218122	**OH**	Racoon		14.61		14.61
AB-YMCA	8	YMCA	HT	10.528522	76.218248	**UG**	XLPE	150	14.27	56	70.27
AB Kaliyath	AB Chiriyan Kandath	AB		10.528363	76.218016	**OH**	Racoon		12.03		12.03
AB Chiriyan Kandath	12	Chiriyan Kandath	LT	10.528236	76.217919	**UG**	XLPE	150	17.61	28	45.61
AB Chiriyan Kandath	AB Kalyan	AB		10.528002	76.218023	**OH**	Racoon		41		41
AB-YMCA	9	Josco	HT	10.528522	76.218248	**UG**	XLPE	150	14.27	56	70.27
AB Kalyan	RMU31103, 14, 13	Kalyan Silks	HT	10.527997	76.217974	**UG**	XLPE	185	6.7	15	21.7
AB Kalyan	P26	Post		10.5277180	76.2180790	**OH**	Racoon		30.77		30.77
RMU Edakalathur	G3	Ground		10.527808	76.218060	**UG**	XLPE	150			0
G3	G4	Ground		10.527792	76.217670	**UG**	XLPE	150			0
G4	15	Vrindhavan Apartment	LT	10.527757	76.217654	**UG**	XLPE	150	57.14	5	62.14

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P26	P13-1, 25	AB Josco, AB Kalanikethan, Kalanikethan	LT	10.527250	76.218086	**OH**	Racoon		51.77		51.77
P13-1	G5	Ground		10.526945	76.218110	**UG**	XLPE	185			0
G5	G6	Ground		10.526774	76.218067	**UG**	XLPE	185			0
G6	19	New Josco	HT	10.526655	76.218267	**UG**	XLPE	185	81.87	22	103.87
P13-1	P14	Post		10.526928	76.218102	**OH**	Racoon				0
P14	P15	Post		10.526621	76.218002	**OH**	Racoon		72.13		72.13
P15	P16, 16	Swapana Theatre	LT	10.526400	76.217896	**OH**	Racoon		24.42		24.42
P16	ABL51107	AB Kollanur		10.526172	76.217769	**OH**	Racoon		31.38		31.38
AB Kollanur	24	Kollanur	LT	10.526363	76.217829	**UG**	XLPE	150	22.83	5	27.83
ABL51107	P17	Post		10.525925	76.217624	**OH**	Racoon				
P17	P18	Post		10.52568	76.217467	**OH**	Racoon		63.62		63.62
P18	21	Paremekkavu(Neeranjali	LT	10.525591	76.217623	**OH**	Racoon		20.97		20.97
P18	AB Statue, 17	Statue	LT	10.525351	76.217298	**OH**	Racoon		37.49		37.49
AB Statue	P19	Post		10.525196	76.217228	**OH**	Racoon		21.85		21.85
P19	AB PT	AB		10.524878	76.217206	**OH**	Racoon		36.2		36.2
AB Pt	G7	Ground		10.524458	76.217412	**UG**	XLPE	300			0
G7	G8	Ground		10.524189	76.217556	**UG**	XLPE	300			0
G8	G9	Ground		10.524185	76.217676	**UG**	XLPE	300			0
G9	20	Paramekavu Temple	LT	10.523848	76.217592	**UG**	XLPE	300	134.32		134.32
AB PT	P20	Post		10.524444	76.216941	**OH**	Racoon				0
P20	ABI51108	Post		10.523784	76.216893	**OH**	Racoon		128.57		128.57
AB Statue	G10	Ground		10.525409	76.217312	**UG**	XLPE	300			0
G10	G11	Ground		10.525497	76.217342	**UG**	XLPE	300			0
G11	G12	Ground		10.525525	76.217061	**UG**	XLPE	300			0

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G12	18	Alukkas	LT	10.526008	76.217048	**UG**	XLPE	300	88.82	20	108.82
P13	AB BVB	AB		10.528943	76.21796	**OH**	Racoon		14.85		14.85
AB BVB	RMU31102	RMU		10.528833	76.217238	**UG**	XLPE	150			
G9	28	Paramekavu SBI	HT	10.523848	76.217592	**UG**	XLPE	300	134.32		134.32
RMU31102	27	Bharatiyar Vidhya Kendra	HT	10.528617	76.216965	**UG**	XLPE	150	138.13	10	148.13
AB BVB	AB SNDP	AB		10.528883	76.217151	**OH**	Racoon		82.58		82.58
AB SNDP	RMU31101, 26	SNDP	LT	10.528929	76.217222	**UG**	XLPE	185	7.22	20	27.22
AB SNDP	P21	Post		10.528919	76.216847	**OH**	Racoon		35.26		35.26
P21	ABI50802	AB		10.529136	76.216338	**OH**	Racoon		61.17		61.17
P21	P22	Post		10.528642	76.216753	**OH**	Racoon				0
P22	P23	Post		10.528149	76.216669	**OH**	Racoon		87.42		87.42
P23	AB CL	AB		10.528101	76.216744	**OH**	Racoon		8.69		8.69
AB CL	7	Capital Legend	LT	10.528040	76.216870	**UG**	XLPE	150	15.35	10	25.35
ABL51106	G13	Ground		10.528943	76.21796	**UG**	XLPE	150			0
G13	G14	Ground		10.528820	76.216780	**UG**	XLPE	150			0
G14	G15	Ground		10.527667	76.216618	**UG**	XLPE	150			0
G15	AB ESI, 5	ESI	LT	10.527679	76.216584	**UG**	XLPE	150	279.1	5	284.1
AB ESI	P24	Post		10.527667	76.216618	**OH**	Racoon				0
P24	P24-1	Post		10.527733	76.216695	**OH**	Racoon				0
P24-1	AB Capital	AB		10.527742	76.216957	**OH**	Racoon		43.57		43.57
AB Capital	22	Capital City	LT	10.527424	76.216993	**UG**	XLPE	150	36.47	5	41.47
AB ESI	P24	Post		10.527667	76.216618	**OH**	Racoon				0
P24	P25	Post		10.527478	76.21657	**OH**	Racoon				0
P25	AB Perinchery	AB		10.527403	76.216597	**OH**	Racoon		33.12		33.12

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB Perinchery	6	Perinchery	LT	10.527259	76.216628	**UG**	XLPE	185	24.13	44	68.13
RMU31103	RMU EDAKALATHUR , 29 (C)	TR EDAKALATHUR (HT) 100 KVA	HT	10.527763	76.217934	**UG**	XLPE	300	42		41.96
RMU31101	30	RMU, Cheloor Seventh Avenue	LT	10.528529	76.216912	**UG**	XLPE	300	108		108.11

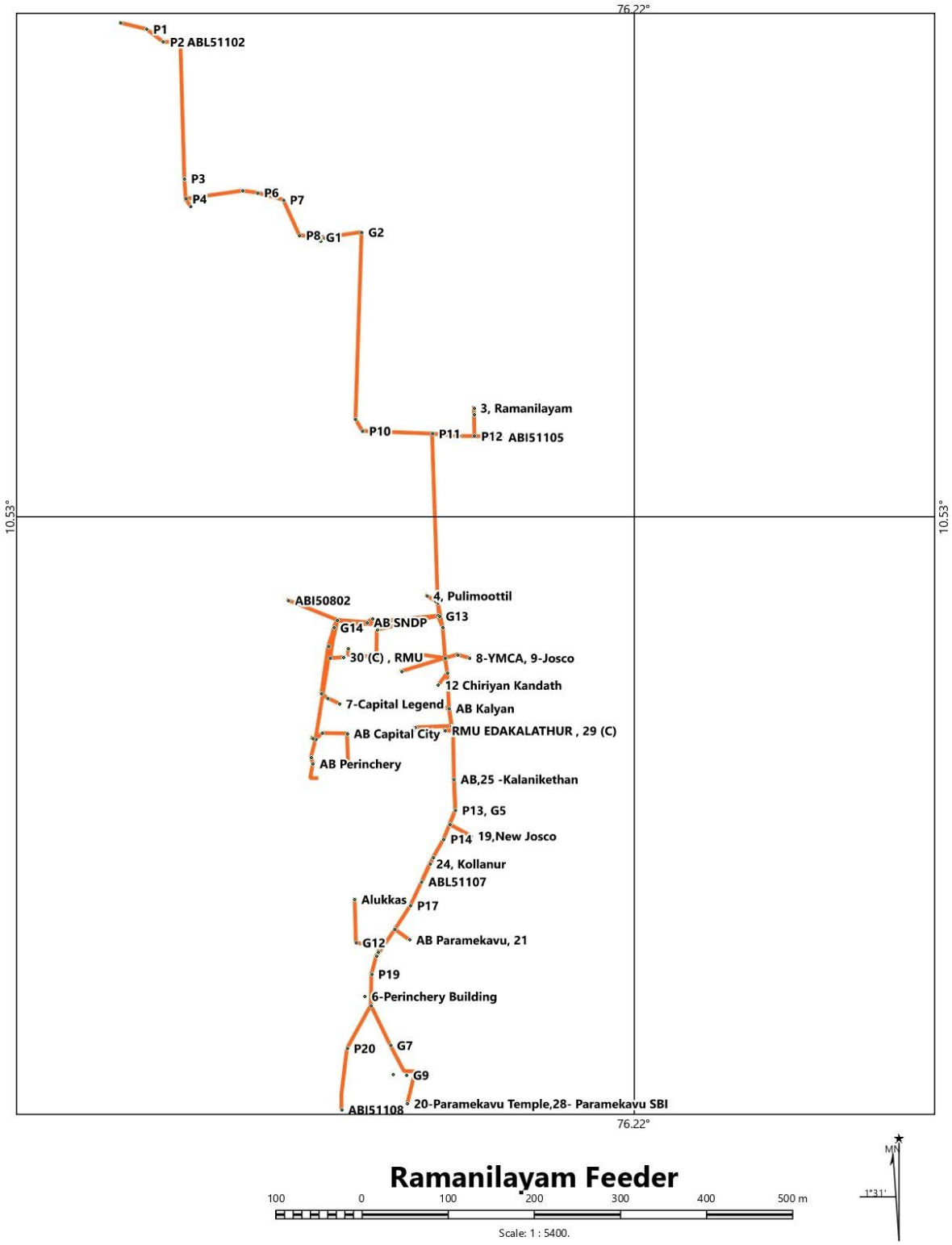

Figure 12: Ramanilayam feeder

12. M O ROAD FEEDER

The following table shows the 11-kV line distance in the M O Road feeder

Table 26: HT line distance –M O Road feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Total distance (m)
SS				10.535032	76.214680				
S-S	G1	Ground		10.534981	76.215007	**UG**	XLPE	300	36.21
G1	G2	Ground		10.531530	76.215136	**UG**	XLPE	300	
G2	P1	Post		10.531540	76.215200	**UG**	XLPE	300	5
P1	G3	Ground		10.529519	76.215011	**UG**	XLPE	300	
G3	P2	Post		10.529268	76.216105	**UG**	XLPE	300	
P2	G31	Ground		10.52907	76.216170	**UG**	XLPE	300	
G31	P3	Post		10.528782	76.216140	**UG**	XLPE	300	5
P3	G4	Ground		10.527338	76.215871	**UG**	XLPE	300	
G4	G32	Ground		10.526698	76.216763	**UG**	XLPE	300	
G32	G5	Ground		10.526698	76.216763	**UG**	XLPE	300	
G5	G33	Ground		10.52548	76.216930	**UG**	XLPE	300	
G5	P4	Post		10.524905	76.216880	**UG**	XLPE	300	1283.54
P4	49	Exhibition	LT	10.524908	76.216807	**UG**	XLPE	185	15
P4	G34	Ground		10.522970	76.216750	**UG**	XLPE	300	
G34	8P	ABI51203		10.522848	76.216595	**UG**	XLPE	300	5
8P	G6	Ground		10.522520	76.213958	**UG**	XLPE	300	
G6	AB1	ABL-51205		10.522069	76.213954	**UG**	XLPE	300	604.41
AB1	11	Pathans	LT	10.522245	76.214085	**UG**	XLPE	185	74.18
AB1	RMU1	RMU-31201		10.522181	76.213901	**UG**	XLPE	185	33.68
RMU1	53	Ragam Theatre	HT	10.522171	76.213797	**UG**	XLPE	185	25
RMU1	RMU2	RMU-31202		10.521768	76.213947	**UG**	XLPE	150	48.96
RMU2	50	Baby Paul	LT	10.521681	76.213874	**UG**	XLPE	150	12.51
AB1	P5	Post		10.521932	76.213976	**OH**	Racoon		15.34
P5	P5-1	Post		10.521924	76.213946	**OH**	Racoon		3.4
P5-1	17	Elite Hotel	HT	10.521741	76.213605	**UG**	XLPE	185	70
P5	P6	Post		10.521421	76.214022	**OH**	Racoon		56.75
P6	10	Manshire	HT	10.521364	76.214104	**UG**	XLPE	185	10.97
P6	P7	Post		10.521207	76.214034	**OH**	Racoon		23.71
P7	P7-1	Post		10.521220	76.213958	**OH**	Racoon		8.44
P7-1	16	Bharath Hotel	HT	10.521370	76.213755	**UG**	XLPE	150	27.73
RMU2	RMU3	RMU-31203		10.520982	76.214061	**UG**	XLPE	300	87.83
RMU3	54	White Palace	HT	10.520982	76.214061	**UG**	XLPE	300	0
P7	P8	Post		10.520820	76.214034	**OH**	Racoon		42.81
P8	P8-1	Post		10.520913	76.213386	**OH**	Racoon	300	71.67
P8-1	15	Lavish	LT	10.521101	76.213528	**UG**	XLPE	300	25.96
P8	AB2	ABL-51206		10.520540	76.214071	**OH**	Racoon		31.23
AB2	9	Store	LT	10.520540	76.214071	**UG**	XLPE	300	
AB2	AB3	Post		10.520014	76.214121	**OH**	Racoon		58.44
AB3	55	MK	HT	10.519291	76.214328	**UG**	XLPE	300	80
AB3	P9	Post		10.519953	76.214128	**OH**	Racoon		6.79
P9	P10	Post		10.520023	76.214316	**OH**	Racoon		21.99
P10	P10-1	Post		10.520083	76.214310	**OH**	Racoon		6.67
P10-1	Tr-1	Lamex(Not marked)	LT	10.52040	76.214309	**OH**	Racoon		35.29
P10	AB Fameel	AB Fameel		10.520237	76.214670	**OH**	Racoon		45.41
AB Fameel	RMU Fameel	RMU Fameel		10.520293	76.214645	**UG**	XLPE		
RMU Fameel	Tr- Fameel	Fameel	LT	10.520405	76.214686	**UG**	XLPE	300	19.95
P10	AB4	ABL-51208		10.520102	76.214511	**OH**	Racoon		23.06
AB4	RMU4,8	RMU-31204, Janardhanan Complex	LT	10.520135	76.214506	**UG**	XLPE	300	3.69
AB4	P11	Post		10.520317	76.215025	**OH**	Racoon		61.08
P11	AB5	ABL51208		10.520366	76.215044	**OH**	Racoon		5.81
AB5	1	Corporation Office	LT	10.520735	76.214975	**OH**	Racoon		41.51
P11	P12	Post		10.520404	76.215202	**OH**	Racoon		21.63
P12	2	BSNL CTD 1	LT	10.520765	76.215087	**UG**	XLPE	300	41.87
P12	3	BSNL CTD 2	LT	10.520765	76.215087	**UG**	XLPE	300	41.87
P12	G36	Ground		10.5203	76.21524	**UG**	XLPE	300	
G36	G37	Ground		10.52039	76.21554	**UG**	XLPE	300	
G37	G38	Ground		10.51995	76.21575	**UG**	XLPE	300	
G38	P12-1	Post		10.519929	76.215364	**UG**	XLPE	300	143.14
P12-1	4	BSNL Pattalam Exchange	HT	10.519805	76.215452	**UG**	XLPE	95	56.76
P12-1	5	BSNL Pattalam Exchange	HT	10.519805	76.215452	**UG**	XLPE	95	56.76
P12-1	6	BSNL Pattalam Exchange	HT	10.519805	76.215452	**UG**	XLPE	95	56.76
AB5	G7	Ground		10.520531	76.216110	**UG**	XLPE	300	
G7	G8	Ground		10.520710	76.216084	**UG**	XLPE	300	
G8	G9	Ground		10.520687	76.215796	**UG**	XLPE	300	
G9	RMU5	RMU-31205		10.521204	76.215696	**UG**	XLPE	300	
RMU5	52	Jai Hind Market	LT	10.521204	76.215696	**UG**	XLPE	300	227.96
RMU5	18	Jai Hind Solar	LT	10.521204	76.215696	**UG**	XLPE	300	227.96

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Total distance (m)
P9	P13	Post		10.519422	76.213076	**OH**	Racoon		129.27
P13	P13-1	Post		10.519320	76.213013	**OH**	Racoon		
P13-1	AB6	ABL-51209		10.519221	76.213037	**OH**	Racoon		24.48
AB6	13	CP Tower	LT	10.519241	76.213103	**UG**	XLPE	300	67.56
P13	P14	Post		10.519215	76.212470	**OH**	Racoon	300	70.17
P14	20	Jonsons	LT	10.519370	76.212283	**UG**	XLPE	300	76.7
AB6	G10	Ground		10.519044	76.213073	**UG**	XLPE	300	
G10	G11	Ground		10.518932	76.212894	**UG**	XLPE	300	
G11	G12	Ground		10.518410	76.212888	**UG**	XLPE		
G12	RMU6	RMU-31211		10.518353	76.212233	**UG**	XLPE		
RMU6	46	Mathrubhumi	HT	10.518091	76.212196	**UG**	XLPE	300	242.46
AB6	G13	Ground		10.519310	76.212945	**UG**	XLPE		
G13	G14	Ground		10.519103	76.212119	**UG**	XLPE		
G14	G15	Ground		10.519990	76.21217	**UG**	XLPE		
G15	P15	Ground		10.520063	76.211764	**UG**	XLPE		250.79
P15	21	Manappuram Hotel	HT	10.519746	76.211848	**UG**	XLPE	300	36.25
	22	Manappuram Hotel	LT	10.519746	76.211848	**UG**	XLPE		5
P15	P16	Post		10.520083	76.211627	**OH**	Racoon		15.16
P16	P16-1	Post		10.520030	76.211616	**OH**	Racoon		5.98
P16-1	29	Kuriland	LT	10.520030	76.211616	**UG**	XLPE	250	15
P16	G16	Ground		10.520075	76.211494	**UG**	XLPE		
G16	RMU7	RMU31208		10.520309	76.211478	**UG**	XLPE		
RMU7	45	Vattekkat Arcade	LT	10.520342	76.211602	**UG**	XLPE	300	79.58
P16	P17	Post		10.520121	76.211405	**OH**	Racoon		24.66
P17	14	Jose Alukas	HT	10.520400	76.211418	**UG**	XLPE	300	50.89
P17	31	New Manshire	HT	10.519552	76.211518	**UG**	XLPE	300	75.14
P17	AB7	ABL-51213		10.520064	76.210882	**OH**	Racoon		57.59
AB7	G19	Ground		10.518936	76.210834	**UG**	XLPE		
G19	RMU8	RMU-31209		10.518793	76.210390	**UG**	XLPE	300	
RMU8	43	Sapphire Hotel	HT	10.518743	76.210353	**UG**	XLPE	300	212.84
RMU8	RMU9	RMU-31210		10.518743	76.210353	**UG**	XLPE	185	50
RMU9	47	TCR Fashion	HT	10.518382	76.210324	**UG**	XLPE	185	
AB7	P18	Post		10.520059	76.210762	**OH**	Racoon		13.15
P18	G17	Ground		10.520064	76.210882	**UG**	XLPE	300	
G17	G18	Ground		10.519531	76.210882	**UG**	XLPE	300	
G18	26	Alukkas Seafort	HT	10.519455	76.210769	**UG**	XLPE	300	87.06
AB7	P19	Post		10.519656	76.210917	**OH**	Racoon		45.29
P19	25	Ammus Regency	HT	10.519614	76.210981	**UG**	XLPE	185	30
P18	P20	Post		10.519997	76.210429	**OH**	Racoon		37.09
P20	P20-1	Post		10.520283	76.210387	**OH**	Racoon		31.97
P20-1	23	Lafame(Sayooja Apartment)	LT	10.520283	76.210387	**OH**	Racoon		
P20-1	P20-2	Post		10.520300	76.210309	**OH**	Racoon		8.74
P20-2	24	Omega Paradise	LT	10.520341	76.210147	**UG**	XLPE	185	30
P20	AB8	ABL-51214		10.519991	76.210033	**OH**	Racoon		43.35
AB8	30	Kovilakam	LT	10.519842	76.210023	**UG**	XLPE	240	37
AB8	P21	Post		10.519938	76.209686	**OH**	Racoon		38.43
P21	P21-1	Post		10.520465	76.209721	**OH**	Racoon		58.42
P21-1	G19	Ground		10.520548	76.209546	**UG**	XLPE	300	
G19	27	Sagara Apartment	LT	10.520896	76.209356	**UG**	XLPE	300	64.99
P21	P22	Post		10.519553	76.209716	**OH**	Racoon		
P22	51	Pearl Dept.	LT	10.519553	76.209716	**OH**	Racoon		42.71
P22	P22-1	Post		10.519583	76.209668	**OH**	Racoon		6.21
P22-1	28	Pearl Regency	HT	10.519613	76.209390	**UG**	XLPE	240	30.61
P15	G20	Ground		10.520081	76.211476	**UG**	XLPE	300	
G20	G21	Ground		10.521663	76.211608	**UG**	XLPE		
G21	G22	Ground		10.521725	76.212136	**UG**	XLPE		
G22	G23	Ground		10.522263	76.212179	**UG**	XLPE		324.72
G23	G24	Ground		10.522255	76.212579	**UG**	XLPE		
G24	AB9, 32	ABL-51212, Kuruppam Road 1	LT	10.522392	76.212581	**UG**	XLPE	300	43.97
G24	AB9, 33	ABL-51212, Kuruppam Road 2	LT	10.522392	76.212581	**UG**	XLPE	300	43.97
AB9	7	Jaya Palace	LT	10.522434	76.212576	**UG**	XLPE	240	15
AB9	G24	Ground		10.522255	76.212579	**UG**	XLPE	300	
G24	G23	Ground		10.522263	76.212179	**UG**	XLPE		
G23	34	Enark Apartment	LT	10.522138	76.211791	**UG**	XLPE	300	53.9
AB9	P23	Post		10.522271	76.212578	**OH**	Racoon		9.15
P23	AB10	ABL-50503		10.522269	76.212192	**OH**	Racoon		42.25
AB10	G25	Ground		10.522273	76.211561	**UG**	XLPE	300	
G25	19	Luciya Palace	HT	10.522009	76.211332	**UG**	XLPE		107.55
AB10	P24	Post		10.522311	76.212319	**OH**	Racoon		14.66
P24	35	Nest Shopping	LT	10.522466	76.212239	**UG**	XLPE	250	25
P23	G26	Ground		10.522188	76.212754	**UG**	XLPE		
G26	G27	Ground		10.521456	76.212532	**UG**	XLPE		
G27	P25	Post		10.521469	76.212468	**UG**	XLPE		117.87
P25	36	Trade Centre1	HT	10.521388	76.212244	**UG**	XLPE	240	27

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Total distance (m)
P25	37	Trade Centre 2	LT	10.521388	76.212244	**UG**	XLPE	240	27
P25	G27	Ground		10.521456	76.212532	**UG**	XLPE	300	
G27	G28	Ground		10.520672	76.212301	**UG**	XLPE		
G28	P26	Post		10.520660	76.212381	**UG**	XLPE		98.89
P26	38	Grand Park Hotel1	HT	10.520526	76.212598	**UG**	XLPE	150	30
P26	39	Grand Park Hotel 2	HT	10.520526	76.212598	**UG**	XLPE	150	30
P26	P27	Post		10.520557	76.212276	**OH**	Racoon		16.18
P27	P28	Post		10.520296	76.212243	**OH**	Racoon		29.09
P28	RMU10	RMU-31207		10.520243	76.212347	**UG**	XLPE	300	19.2
RMU10	42	Hotel Garuda	HT	10.520216	76.212513	**UG**	XLPE	240	29.41
P28	P29	Post		10.519984	76.212160	**OH**	Racoon		34.6
P29	RMU11, 44	RMU31206, TSR Dist. Cop. Bank	HT	10.519818	76.212369	**UG**	XLPE	300	30
P29	P30	Post		10.518497	76.211951	**OH**	Racoon		168.32
P27	P31	Post		10.521545	76.212556	**OH**	Racoon		113.5
P31	RMU12, 6	Not Marked, Fridge Hosue	HT	10.521305	76.212595	**UG**	XLPE	300	30
P31	P32	Post		10.522188	76.212749	**OH**	Racoon		74.19
P32	P33	Post		10.522245	76.212883	ABC			25.97
P33	40	Pooram Residency1	HT	10.522222	76.213272	**UG**	XLPE	240	30
P33	41	Pooram Residency 2	LT	10.522222	76.213272	**UG**	XLPE	240	30
AB1	G29	Ground		10.522499	76.213876	**UG**	XLPE	185	
G29	G30	Ground		10.522614	76.213349	**UG**	XLPE	185	
G30	12	Pathayyapura	LT	10.522421	76.21327	**UG**	XLPE	185	141.43
RMU Lavish	G39			10.520902	76.213087	UG	XLPE	300	
G39	G40			10.521102	76.213102	UG	XLPE	300	
G40	RMU MT			10.521114	76.213142	UG	XLPE	300	67
RMU MT	59 (C)	Mar Tower	LT	10.521249	76.213105	UG		150	60
P27	RMU			10.520634	76.212157	UG		300	0
RMU Sunny	57	Sunny Diamond Kuruppam Rd (Pantaloons)	HT	10.520827	76.212005	UG		300	61
P 15	G41			10.520085	76.211695	UG	XLPE	300	0
G41	58 (C), RMU V.K	Vee Kay Tower	LT	10.520110	76.211715	UG		300	26

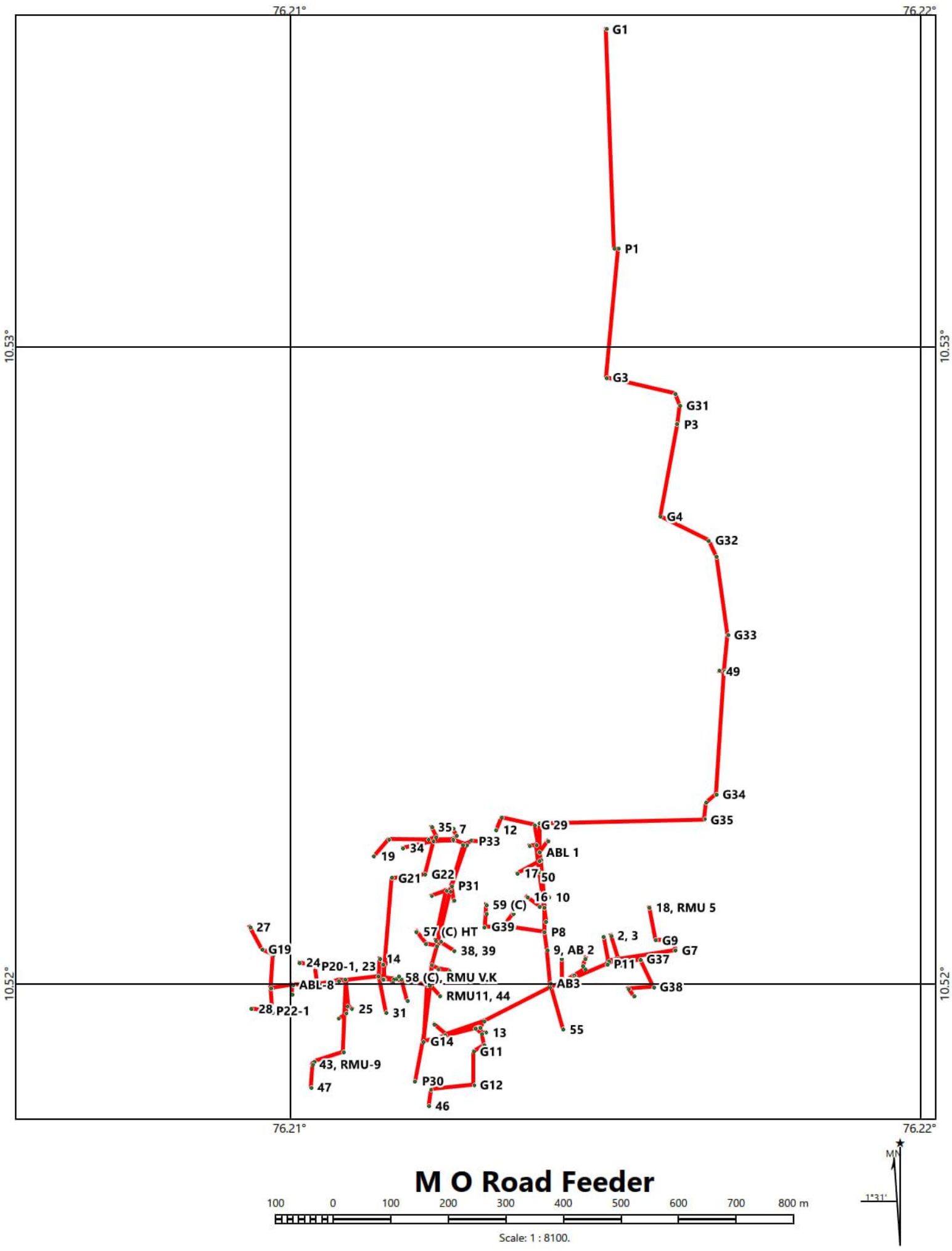

Figure 13: M O Road feeder

13. KOTTAPURAM FEEDER

The following table shows the 11-kV line distance in the Kottapuram feeder

Table 27: HT line distance –Kottapuram feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
	S-S	Substation feeder		10.53517	76.21455							
SS	2P	Post		10.535262	76.214493	**UG**	XLPE	300	1		16	16
2P	G1	Ground		10.535309	76.214497	**UG**	XLPE	300	1			0
G1	P1	Post		10.535347	76.211859	**UG**	XLPE	300	1	306.02	10	316.02
P1	ABL51302	ABL		10.535252	76.211305	**OH**	Racoon		1	61.54		61.54
ABL51302	G2	Ground		10.535342	76.211239	**UG**	XLPE	300	1		7	7
G2	ABL50906	ABL		10.535331	76.207935	**UG**	XLPE	300	1		7	7
ABL50906	G3	Ground		10.535289	76.205362	**UG**	XLPE	300	1			0
G3	ABL51305	ABL		10.535203	76.205368	**UG**	XLPE	300	1	665.14	7	672.14
ABL51305	P2	Post		10.535047	76.205354	**OH**	Racoon			17.12		17.12
P2	AB ar	AB ARikkariya		10.535052	76.205424	**OH**	Racoon			7.68		7.68
AB ar	1	Arikkariya	LT	10.534980	76.205692	**UG**	XLPE	300	1	30.4	7	37.4
P2	P9,	ABL51306		10.533987	76.205074	**OH**	Racoon			121.19		121.19
ABL51306	2	Rama Devi	LT	10.533919	76.205709	**OH**	Racoon			69.91		69.91
2	P3	Post		10.533871	76.206127	**OH**	Racoon			46.06		46.06
P3	P4	Post		10.533967	76.20618	**OH**	Racoon			12.1		12.1
P4	AB Mk	AB mookambika		10.533993	76.206134	**OH**	Racoon			5.8		5.8
AB Mk	3	Mookambika	LT	10.534021	76.206123	**UG**	XLPE	150	1	3.32	40	43.32
P4	RMU31301	RMU		10.534310	76.206270	**UG**	XLPE	300	1			0
RMU31301	57	Tangerine	LT	10.53429	76.206290	**UG**	XLPE	300	1	43.25	10	53.25
P3	4	Rama Devi 3	LT	10.533827	76.206238	**OH**	Racoon			13.09		13.09
4	P5	Post		10.533748	76.206853	**OH**	Racoon			68.3		68.3

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P5	15	Vigneshwara	LT	10.532767	76.206776	**UG**	XLPE	300	1	108.84	5	113.84
P5	ABL51307	ABL		10.533700	76.207387	**OH**	Racoon		1	58.7		58.7
ABL51307	G4	Ground		10.534289	76.207404	**UG**	XLPE	300	1			0
G4	RMU31302	RMU		10.534287	76.207566	**UG**	XLPE	300	1	82.91		82.91
RMU31302	52	Maithree Apartment	LT	10.534294	76.207746	**UG**	XLPE	185	1	19.72	5	24.72
RMU31302	RMU31303	RMU		10.534267	76.207355	**UG**	XLPE	300	1			0
RMU31303	64	MRG Sabari	LT	10.534170	76.207164	**UG**	XLPE	300	1	46.7		46.7
ABL51307	P6	Post		10.533629	76.207678	**OH**	Racoon			32.99		32.99
P6	P7, ABL	ABL51308		10.533174	76.207687	**OH**	Racoon			50.37		50.37
P7	AB Kayson	AB		10.533137	76.207609	**OH**	Racoon			9.47		9.47
AB Kayson	5	Kayson Apartmemnt	LT	10.533200	76.207395	**UG**	XLPE	185	1	24.44	7	31.44
ABL51308	RMU31305	RMU		10.533070	76.207253	**UG**	XLPE	300	1	53.97		53.97
RMU31305	50	Samruthi Apartment	LT	10.533116	76.207013	**UG**	XLPE	185	1	26.76	10	36.76
RMU31305	G5	Ground		10.532483	76.207279	**UG**	XLPE	300	1			0
G5	RMU31306	RMU		10.532488	76.207234	**UG**	XLPE	300	1	69.95		69.95
RMU31306	51	Sree Ram Apartment	LT	10.532283	76.207158	**UG**	XLPE	300	1	24.15	15	39.15
RMU31306	G6	Ground		10.531985	76.207244	**UG**	XLPE	300	1			0
G6	G7	Ground		10.531891	76.207096	**UG**	XLPE	300	1			0
G7	RMU31307	RMU		10.531845	76.206929	**UG**	XLPE	300	1			0
RMU31307	56	Indivar	LT	10.531922	76.206980	**UG**	XLPE	300	1	104.06	15	119.06
P6	P8	Post		10.53362376	76.207765	**OH**	Racoon		1	9.54		9.54
P8	19	Vykundam	LT	10.533540	76.20777	**UG**	XLPE	300	1	9.29		9.29
P6	RMU31304	RMU		10.533765	76.208144	**UG**	XLPE	300	1			0
RMU31304	66	Kalyan Heritage	LT	10.533979	76.208074	**UG**	XLPE	300	1	69.21		69.21
P9	P10	Post		10.533612	76.205038	**OH**	Racoon			41.87		41.87
P10	AB Omega	AB		10.533536	76.204918	**OH**	Racoon			15.59		15.59

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB Omega	6	Omega royal	LT	10.533446	76.204785	**UG**	XLPE	300	1	17.64	15	32.64
P10	7	Prarthana	LT	10.533234	76.205020	**OH**	Racoon			41.87		41.87
7	P11	Post		10.532472	76.204971	**OH**	Racoon			84.81		84.81
P11	RMU31308	RMU		10.532427	76.204994	**UG**	XLPE	300	1			0
RMU31308	44	IRA Apartment	LT	10.532450	76.205137	**UG**	XLPE	300	1	21.44	40	61.44
P11	P12	Post		10.531041	76.204957	**OH**	Racoon					0
P12	P13	Post		10.530996	76.203989	**OH**	Racoon			264.36		264.36
P13	P14	Post		10.531333	76.203826	**OH**	Racoon					0
P14	ABL51309	ABL		10.531577	76.203536	**OH**	Racoon					0
ABL51309	P15	Post		10.531666	76.202435	**OH**	Racoon			203.9		203.9
P15	18	Aldebaren	LT	10.531978	76.202557	**UG**	XLPE	300	1	37		37
P15	AB Athira	AB		10.531560	76.202466	**OH**	Racoon			12.21		12.21
AB Athira	17	Athira Abode	LT	10.531127	76.202366	**UG**	XLPE	300	1	49.13		49.13
P15	P16	Post		10.531697	76.201994	**OH**	Racoon			48.39		48.39
P16	21	Cheloor Citadel	LT	10.531095	76.202126	**UG**	XLPE	300	1	68.14	20	88.14
P13	ABL51310	ABL		10.529424	76.205071	**OH**	Racoon					0
ABL51310	P17	Post		10.529078	76.205285	**OH**	Racoon			255.25		255.25
P17	RMU31309	RMU		10.529081	76.205175	**UG**	XLPE	300	1	12.04		12.04
RMU31309	68	Top Crystal Apartment	LT	10.528966	76.205109	**UG**	XLPE	150	1	14.63	5	19.63
P17	P18	Post		10.528186	76.205505	**OH**	Racoon					0
P18	8	Kottappuram Vyduthi Bhavan	LT	10.527899	76.205496	**OH**	Racoon			135.64		135.64
8	AB Sr	AB Sreesakthi		10.527837	76.205551	**OH**	Racoon			9.13		9.13
AB Sr	14	Sreesakthi	LT	10.52792	76.205702	**UG**	XLPE	300	1	18.91	30	48.91
8	P19	Post		10.527675	76.205462	**OH**	Racoon			25.05		25.05
P19	G8	Ground		10.527695	76.206803	**UG**	XLPE	300	1			0
G8	G9	Ground		10.527816	76.206865	**UG**	XLPE	300	1			0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
G9	G10	Ground		10.527889	76.207354	**UG**	XLPE	300	1			0
G10	G11	Ground		10.527813	76.207395	**UG**	XLPE	300	1			0
G11	G12	Ground		10.528062	76.207874	**UG**	XLPE	300	1			0
G12	G13	Ground		10.528313	76.207821	**UG**	XLPE	300	1			0
G13	9	Ragamalikapuram	LT	10.528318	76.207778	**UG**	XLPE	300	1	319.01		319.01
P19	P20	Post		10.527153	76.205667	**OH**	Racoon			61.95		61.95
P20	AB Zodiac	AB		10.527163	76.205516	**OH**	Racoon			16.57		16.57
AB Zodiac	13	Zodiac	LT	10.527070	76.205368	**UG**	XLPE	185	1	19.19	15	34.19
P20	ABL51311	ABL		10.526909	76.205723	**OH**	Racoon			27.68		27.68
ABL51311	AB	AB Vintage, AB Heights		10.526971	76.20585	**OH**	Racoon			15.5		15.5
AB Vintage	10	Cheloor Vintage	LT	10.527029	76.205899	**UG**	XLPE	185	1	8.36	25	33.36
AB Heights	20	Cheloor Heights	LT	10.526924	76.206308	**UG**	XLPE	185	1	51.82	15	66.82
ABL51311	P21	Post		10.52669	76.204511	**OH**	Racoon			134.86		134.86
P21	P22	Post		10.526675	76.20447	**OH**	Racoon			4.78		4.78
P22	G14	Ground		10.527135	76.204398	**UG**	XLPE	185	1			0
G14	RMU31310	RMU		10.527117	76.204354	**UG**	XLPE	185	1			0
RMU31310	55	Vaigai	LT	10.527256	76.204299	**UG**	XLPE	185	1	73.21	7	80.21
P21	48	Swetha	LT	10.527805	76.204279	**UG**	XLPE	185	1	125.92		125.92
P22	ABI51803	ABI		10.526442	76.204098	**OH**	Racoon			48.19		48.19
ABL51311	P23,	AB Achuthan		10.526418	76.205919	**OH**	Racoon			58.39		58.39
AB Achuthan	49	Achutan	LT	10.526395	76.206129	**UG**	XLPE	300	1	23.13	7	30.13
P23	P23-1	Post		10.526237	76.206023	**OH**	Racoon		1	23.03		23.03
P23-1	G17	Ground		10.526357	76.206363	**UG**	XLPE	300	1			0
G17	RMU31311	RMU		10.526423	76.20638	**UG**	XLPE	300	1			0
RMU31311	65	Civanta Apartment	LT	10.526538	76.206395	**UG**	XLPE	300	1	59.87	10	69.87
P23-1	P24	Post		10.525827	76.206114	**OH**	Racoon			46.43		46.43
P24	AB Sivapuri	AB		10.525818	76.206156	**OH**	Racoon			4.7		4.7

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB Sivapuri	G15	Ground		10.526031	76.207069	**UG**	XLPE	300	1		7	7
G15	G16	Ground		10.526211	76.207058	**UG**	XLPE	300	1			0
G16	RMU31312	RMU		10.526294	76.207482	**UG**	XLPE	300	1			0
RMU31312	60	SivaPuri	LT	10.526182	76.207508	**UG**	XLPE	300	1	182.4	35	217.4
P24	P25	Post		10.525516	76.206109	**OH**	Racoon					0
P25	P26	Post		10.525294	76.206139	**OH**	Racoon			59.18		59.18
P26	AB Pankaj	AB		10.525298	76.206247	**OH**	Racoon			11.83		11.83
AB Pankaj	16	Pankaj	LT	10.525285	76.206324	**UG**	XLPE	300	1	8.55	7	15.55
P26	AB Velan, 11	Vellan	LT	10.524298	76.206639	**OH**	Racoon			130.58		130.58
AB Velan	P26	Post		10.524327	76.206729	**OH**	Racoon			10.36		10.36
P26	AB Love	AB		10.524357	76.206794	**OH**	Racoon			7.85		7.85
AB Love	12	Love Dale	LT	10.524454	76.206703	**UG**	XLPE	185	1	14.64	7	21.64
AB Velan	G18, P27	Ground, Post		10.524344	76.206840	**UG**	XLPE	300	1			0
G18	RMU31313	RMU		10.524019	76.207042	**UG**	XLPE	300	1			0
RMU31313	63	Nandana Plaza	LT	10.524007	76.206946	**UG**	XLPE	300	1	75.38	15	90.38
AB Love	P27	Post		10.524344	76.206840	**OH**	Racoon					0
P27	ABI50505	ABI		10.523436	76.207412	**OH**	Racoon			128.07		128.07
ABL50906	RMU-31324	RMU		10.53440	76.20735	UG	XLPE	300		160	10	170
RMU-31324	11344	ASSET PLATINA	LT	10.53444	76.20694	UG	XLPE	300		50		50
ABL-51309	G19	Ground		10.53251	76.20343	UG	XLPE	300		100	5	105
G19	RMU	RMU vishram		10.53247	76.20308	UG	XLPE	300		25		25
RMU vishram	11343	Vishraam Icon Appartment	LT	10.53217	76.20276	UG	XLPE	300		40		40

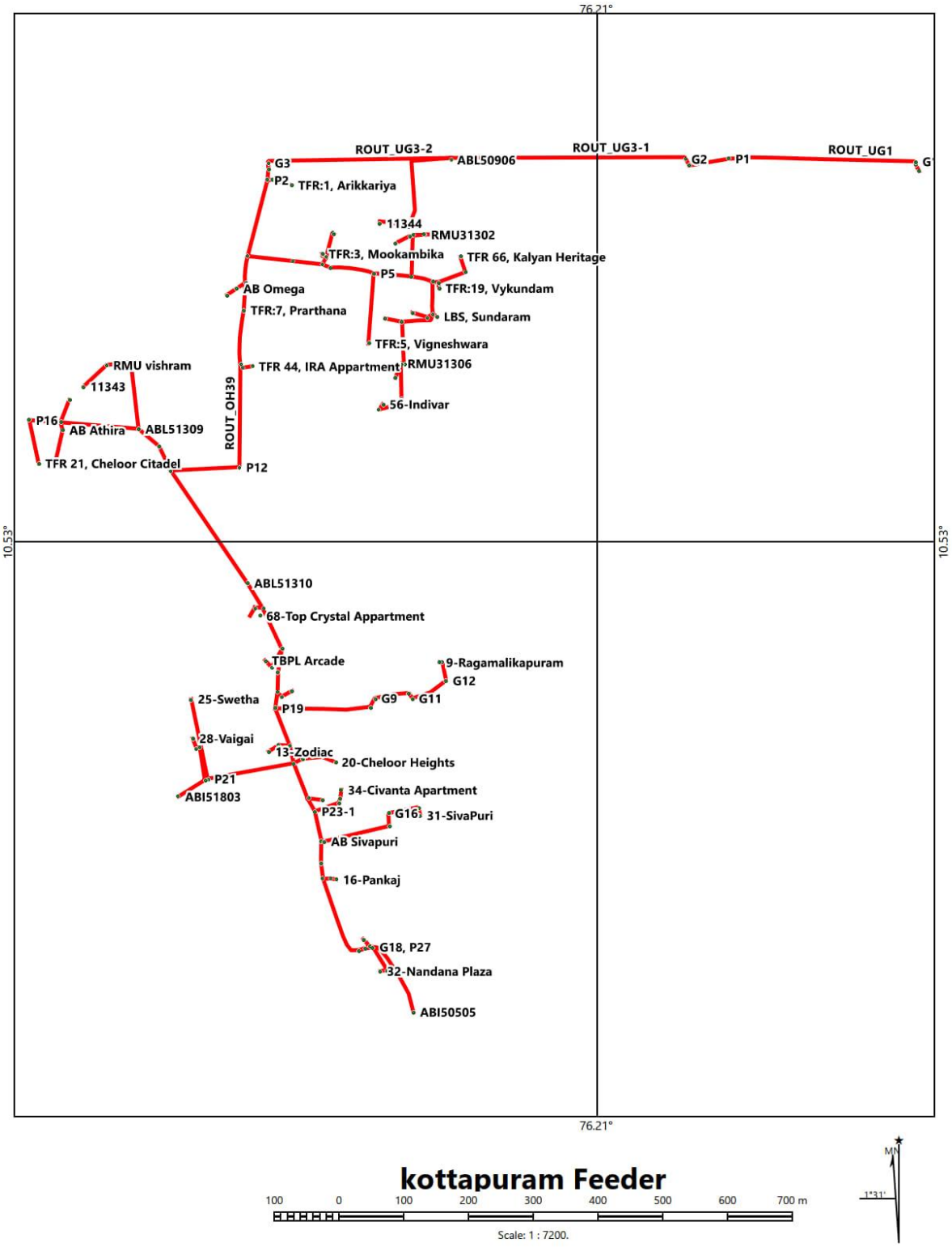

Figure 14: Kottapuram feeder

14. CHEMBUKAVU FEEDER

The following table shows the 11-kV line distance in the Chembukavu feeder.

Table 28: HT line distance – Chembukavu feeder

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
	S-S	Substation feeder		10.53517	76.21455						
S-S	P1	Post		10.535240	76.214603	**UG**	XLPE	300		30	30
P1	G1	Ground		10.535189	76.214889	**UG**	XLPE	300			0
G1	P2	Post		10.534928	76.215162	**UG**	XLPE	300	81.76		81.76
P2	AB bb	AB Big Bazar		10.534974	76.215234	**OH**	Racoon		9.38		9.38
AB bb	1	Big Bazar	HT	10.534844	76.215636	**UG**	XLPE	300	46.23	7	53.23
P2	G2	Ground		10.53519	76.215239	**UG**	XLPE	300			0
G2	G3	Ground		10.535286	76.215405	**UG**	XLPE	300			0
G3	G4	Ground		10.535349	76.216771	**UG**	XLPE	300			0
G4	G5	Ground		10.535251	76.216929	**UG**	XLPE	300			0
G5	P3	Post		10.534976	76.216992	**UG**	XLPE	300	253.99		253.99
RMU Triumph	RMU31401, 2	Jawahar	LT	10.533837	76.217074	**UG**	XLPE	300	85		85
P3	RMUn	RMU- Asset		10.534907	76.216971	**UG**	XLPE	300	8		8
RMUn	G31	Ground		10.534829	76.216398	**UG**	XLPE	300			
G31	31	Asset Galleri		10.535123	76.216265	**UG**	XLPE	300	99.19	5	104
RMUn	G6	Ground		10.534987	76.217098	**UG**	XLPE	240			0
G6	G7	Ground		10.534900	76.217125	**UG**	XLPE	240			0
G7	11	Swathy Residency	LT	10.535036	76.217486	**UG**	XLPE	240	64	20	84
RMUn	G6	Ground		10.534987	76.217098	**UG**	XLPE	280			0
G6	G7	Ground		10.534900	76.217125	**UG**	XLPE	280			0

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G7	11	Swathi Residency	LT	10.535036	76.217486	**UG**	XLPE	280	64.01	20	84.01
RMU31401	G8	Ground		10.533219	76.217274	**UG**	XLPE	300		4	4
G8	P4	Post		10.532999	76.217193	**UG**	XLPE	300			0
P4	G9	Ground		10.533104	76.217351	**UG**	XLPE	300			0
G9	G10	Ground		10.532870	76.219178	**UG**	XLPE	300			0
G10	G11	Ground		10.532621	76.219306	**UG**	XLPE	300			0
G11	ABL51402	AB		10.532394	76.219318	**UG**	XLPE	300	382.14		382.14
ABL51402	P5	Post		10.532375	76.219396	**OH**	Racoon				0
P5	P6	Post		10.531637	76.219399	**OH**	Racoon		90.42		90.42
P6	AB KSFE	AB		10.531489	76.219285	**OH**	Racoon		20.58		20.58
AB KSFE	15	KSFE	HT	10.531484	76.219105	**UG**	XLPE	240	19.71	7	26.71
P6	P7	Post		10.531032	76.219422	**OH**	Racoon				0
P7	P8	Post		10.530808	76.219429	**OH**	Racoon		91.76		91.76
P8	ABI51105	AB		10.530816	76.218397	**OH**	Racoon		112.96		112.96
P8	ABI51403	AB		10.529985	76.219392	**OH**	Racoon		91.12		91.12
P8	P9	Post		10.530807	76.219894	**OH**	Racoon		50.9		50.9
P9	AB CH	AB		10.530901	76.219834	**OH**	Racoon		12.3		12.3
AB CH	10	Central Hotel	HT	10.531321	76.219899	**UG**	XLPE	240	47	7	54
P8, AB Agro Bazar	G12	Ground		10.530807	76.219895	**UG**	XLPE	300			0
AB Agro Bazar	G13	Ground		10.530797	76.220654	**UG**	XLPE	300			0
G13	RMU31402	RMU		10.530761	76.220646	**UG**	XLPE	300			0
RMU31402	13	Agro	LT	10.530756	76.220664	**UG**	XLPE	300	140.21	5	145.21
P9	P10	Post		10.530809	76.221516	**OH**	Racoon		177.54		177.54
P10	G14	Ground		10.530814	76.22142	**UG**	XLPE	240			0
G14	G15	Ground		10.529275	76.221392	**UG**	XLPE	240			0

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G15	4	Exchange 1	HT	10.529062	76.221863	**UG**	XLPE	240	237.46	7	244.46
G15	5	Exchange 2	HT	10.529062	76.221863	**UG**	XLPE	240	237.46	7	244.46
P10	9	Museum	LT	10.530829	76.221687	**OH**	Racoon		18.85		18.85
P10	ABL51404	AB		10.530897	76.223431	**OH**	Racoon				0
ABL51404	ABL51405	AB		10.530910	76.224284	**OH**	Racoon		284.47		284.47
ABL51405	G16	Ground		10.530589	76.224176	**UG**	XLPE	300			0
G16	G17	Ground		10.530093	76.224199	**UG**	XLPE	300			
G17	G18	Ground		10.529944	76.224188	**UG**	XLPE	300			
G18	G19	Ground		10.529764	76.224177	**UG**	XLPE	300			
G19	G20	Ground		10.529615	76.223911	**UG**	XLPE	300			
G20	G21	Ground		10.529547	76.223655	**UG**	XLPE	300			
G21	G22, 3	Co-operative Road	LT	10.529555	76.223553	**UG**	XLPE	300	202.48	7	209.48
ABL51405	P11	Post		10.531048	76.224375	**OH**	Racoon				
P11	P12, 14	Mana Line	LT	10.531945	76.22436	**OH**	Racoon		117.46		117.46
P12	P13	Post		10.532084	76.224351	**OH**	Racoon		15.41		15.41
P13	G23	Ground		10.532116	76.224258	**UG**	XLPE	300		5	5
G23	G24	Ground		10.532425	76.224301	**UG**	XLPE	300			
G24	6	Sougandhika	LT	10.532419	76.224316	**UG**	XLPE	300	47.05	7	54.05
P13	AB Navani	AB		10.532341	76.222739	**OH**	Racoon		178.72		178.72
AB Navani	12	Navani Holy View	LT	10.532599	76.222672	**UG**	XLPE	185	29.46	7	36.46
AB Navani	P14	Mana Line	LT	10.532444	76.221984	**OH**	Racoon		83.42		83.42
P14	AB KMP	AB		10.532354	76.221943	**OH**	Racoon		10.92		10.92
AB KMP	30	KMP Swapnapuri	LT	10.532223	76.221895	**UG**	XLPE	185	15.42	20	35.42
ABL51405	P15	Post		10.530937	76.224358	**OH**	XLPE				
P15	P16	Post		10.530953	76.22567	**OH**	XLPE		152.25		152.25

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P16	AB Caza		LT	10.531038	76.225556	**OH**	XLPE		15.62		15.62
AB Caza	7	Cheloor Cazeblanka	LT	10.531311	76.225649	**UG**	XLPE	185	31.87	12	43.87
P16	P17	Post		10.530955	76.226264	**OH**	Racoon				
P17	P18, 8	Southern	LT	10.530926	76.22625	**OH**	Racoon		68.57		68.57
P18	AB Atreya	AB		10.528705	76.226187	**OH**	Racoon		245.76		245.76
AB Atreya	RMU31403	RMU		10.528705	76.226680	**UG**	XLPE	300			0
RMU31403	16	Divya Ram Hospital (Atreya)	HT	10.528705	76.226680	**UG**	XLPE	300	53.96	7	60.96
AB Atreya	P19	Post		10.527482	76.226134	**OH**	Racoon		135.4		135.4
P19	AB BP	AB		10.527476	76.226151	**UG**	XLPE	300	1.98		1.98
AB BP	RMU 31404, 17	Bishop Palace	HT	10.527635	76.226238	**UG**	XLPE	300	20	7	27
P19	ABL51406	AB		10.527103	76.22612	**OH**	Racoon				0
ABL51406	AB BP, 28	Bishop Palace	LT	10.526115	76.226065	**OH**	Racoon		151.4		151.4
AB BP	P20	Post		10.525691	76.226041	**OH**	Racoon		46.97		46.97
P20	18	Kings fort	LT	10.525695	76.225917	**OH**	ABC		13.58		13.58
P20	P21	Post		10.525335	76.226022	**OH**	Racoon		39.43		39.43
P21	ABI51410	AB		10.524497	76.225966	**OH**	Racoon				0
P21	P22	Post		10.525432	76.226059	**OH**	Racoon				0
P22	ABL51407	AB		10.525533	76.226316	**OH**	Racoon				0
ABL51407	P23	Post		10.525941	76.227409	**OH**	Racoon				0
P23	P24	Post		10.526431	76.228472	**OH**	Racoon		297.96		297.96
P24	AB Sky Line	AB		10.526609	76.228458	**UG**	XLPE	300			0
AB Sky Line	G25	Ground		10.526875	76.228303	**UG**	XLPE	300			0
AB Sky Line	23	Skyline Garland	LT	10.526894	76.22833	**UG**	XLPE	300	57.34	7	64.34

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P24	AB Soda varky, 20	Soda varky	LT	10.526630	76.228808	**OH**	Racoon		42.86		42.86
AB Soda varky	P25	Post		10.526696	76.229089	**OH**	Racoon		31.61		31.61
P25	21	Sarayu Apartment	LT	10.527064	76.228926	**OH**	Racoon		44.44		44.44
P25	P26	Post		10.526895	76.229619	**OH**	Racoon				0
P26	P27	Post		10.527108	76.230063	**OH**	Racoon				0
P27	ABL51409	AB		10.52733	76.23044	**OH**	Racoon		164.27		164.27
ABL51409	AB Kollanur Oriental	AB		10.527431	76.230394	**OH**	Racoon		12.25		12.25
AB Kollanur Oriental	G26	Ground		10.527670	76.23025	**UG**	XLPE	300			0
G26	24	Kollanur Oriental	LT	10.527703	76.230158	**UG**	XLPE	300	41.49	40	81.49
ABL51409	P28	Post		10.527652	76.230830	**OH**	Racoon				0
P28	P29	Post		10.527749	76.230871	**OH**	Racoon				0
P29	P30	Post		10.527888	76.231176	**OH**	Racoon				0
P30	P31	Post		10.528096	76.231451	**OH**	Racoon		140.02		140.02
P31	ABI50409, 22	Panmukkumpilly Sastha Temple	LT	10.528261	76.231702	**OH**	Racoon		33.51		33.51
P21	ABL51408	AB		10.525272	76.225681	**OH**	Racoon				0
ABL51408	P31	Post		10.525176	76.22527	**OH**	Racoon				0
P31	P32	Post		10.524753	76.224435	**OH**	Racoon				0
P32	P33	Post		10.52467	76.224341	**OH**	Racoon		206.83		206.83
P33	P34	Post		10.524940	76.224318	**OH**	Racoon		32.36		32.36
P34	AB CTR	AB		10.525019	76.224222	**OH**	Racoon		14.86		14.86
AB CTR	19	Cheloor Tudoor Rose	LT	10.525106	76.224062	**UG**	XLPE	300	19.98	7	26.98
P34	P35	Post		10.525685	76.224243	**OH**	Racoon		82.58		82.58

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P35	AB Gayathri	AB Gayathri		10.525663	76.224283	**OH**	Racoon		6.04		6.04
AB Gayathri	26	Gayathri Apartment	LT	10.525638	76.224343	**UG**	XLPE	300	7.13	20	27.13
P35	P36	Post		10.526207	76.224215	**OH**	Racoon				0
P36	25	Keeramkulangara	LT	10.526226	76.224118	**OH**	Racoon		66.33		66.33
P33	P37	Post		10.524628	76.224362	**OH**	Racoon				0
P37	P38	Post		10.524441	76.224230	**OH**	Racoon		34.27		34.27
P38	AB Sreyas	AB		10.524423	76.224250	**OH**	Racoon		2.96		2.96
AB Sreyas	G27	Ground		10.524223	76.224260	**UG**	XLPE	300			0
G27	27	Sreyas Apartment	LT	10.524157	76.224478	**UG**	XLPE	300	50.68	7	57.68
P38	G28	Ground		10.524239	76.22398	**UG**	XLPE	300	35.33		35.33
G28	G29	Ground		10.523659	76.222731	**UG**	XLPE	300			0
G29	G30	Ground		10.523352	76.221706	**UG**	XLPE	300			0
G30	RMU31405	RMU		10.523778	76.221623	**UG**	XLPE	300			0
RMU31405	29	Forus Apartment	LT	10.523746	76.221569	**UG**	XLPE	300	323.19	7	330.19
RMUn	RMU Triumph	RMU Triumph		10.534598	76.217041	**UG**	XLPE	300	41		41
RMU Triumph	32	Vishram milstone	LT	10.534678	76.217898	**UG**	XLPE	300	116		116

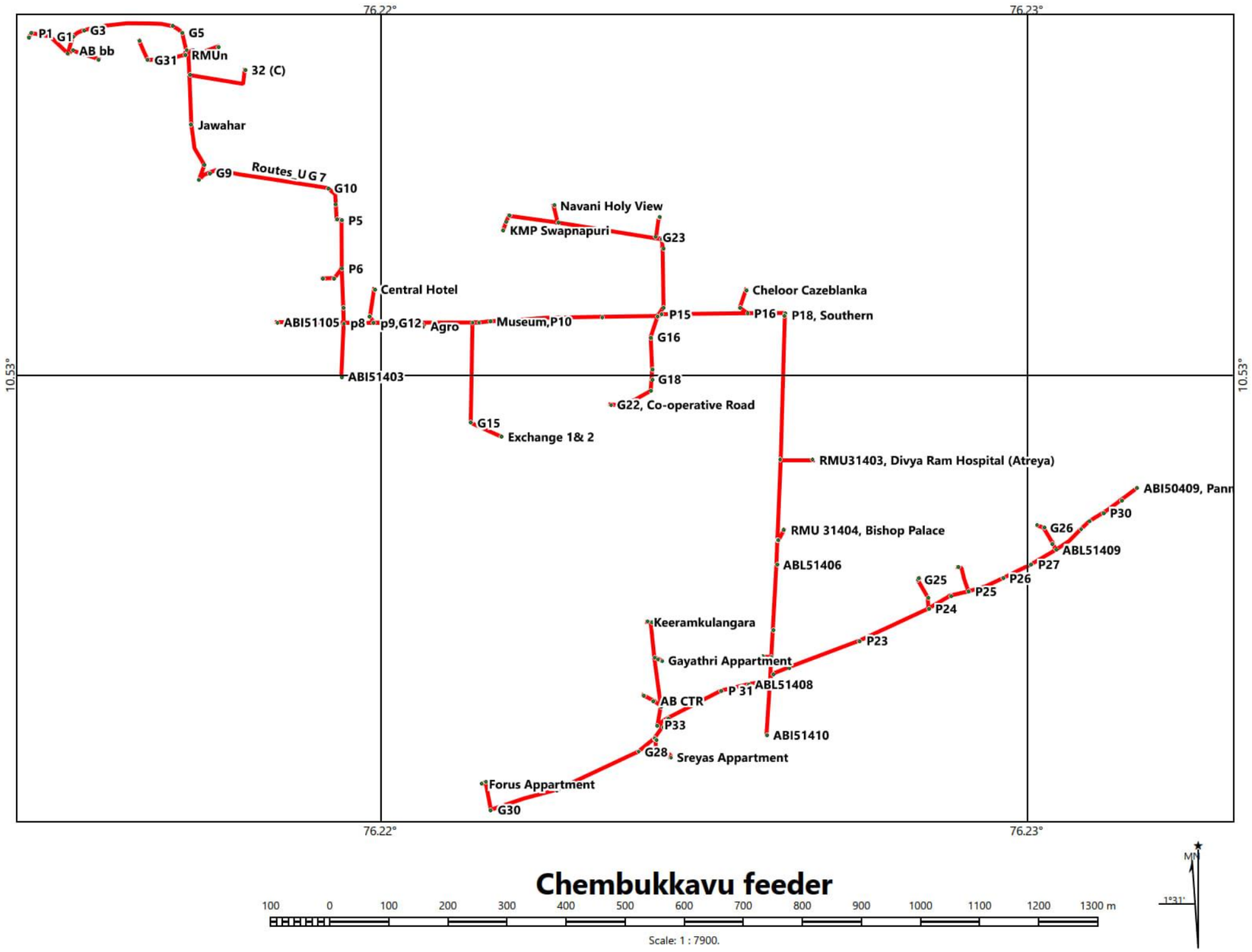

Figure 15: Chembukavu feeder

15. SHORNUR ROAD FEEDER

The following table shows the 11-kV line distance in the Shornur road feeder

Table 29: HT line distance – Shornur road feeder

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
ss		Substation		10.535032	76.214680						
SS	2P	Post		10.535226	76.214462	**UG**	XLPE	300			0
2P	G1	Ground		10.535310	76.214458	**UG**	XLPE	300			0
G1	ABL51502	AB		10.535327	76.213772	**UG**	XLPE	300	95.79	30	125.79
ABL51502	RMU31501, 35-Bismi	RMU31501, Bismi	HT	10.535520	76.213630	**UG**	XLPE	300	26.41	3	29.41
RMU31501	36- Bismi	Bismi	LT	10.535688	76.213811	**UG**	XLPE	300	27.16	20	47.16
RMU31501	G2	Ground		10.535438	76.213605	**UG**	XLPE	300			0
G2	G3	Ground		10.535432	76.213177	**UG**	XLPE	300			0
G3	RMU31502, 45-Pranavam Apartment	Pranavam Apartment	LT	10.535874	76.213136	**UG**	XLPE	300	111		111.04
RMU31502	G4	Ground		10.536289	76.213188	**UG**	XLPE	185			0
G4	RMU31503	RMU		10.536289	76.213296	**UG**	XLPE	185			0
RMU31503	46	Top Orchid Apartment	LT	10.536466	76.213430	**UG**	XLPE	185	85.83	30	115.83
ABL51502	P3	Post		10.535355	76.213445	**OH**	Racoon		36.38		36.38
P3	G7	Ground		10.535344	76.213345	**UG**	XLPE	300			0
G7	G8	Ground		10.534936	76.213325	**UG**	XLPE	300			0
G8	G9	Ground		10.534944	76.213137	**UG**	XLPE	300			0
G9	01	Sree Hari Apartments	LT	10.534460	76.213069	**UG**	XLPE	300	128.59	10	138.59
P3	P1	Post		10.535361	76.213138	**OH**	Racoon		32.88		32.88
P1	AB-Sree	AB-Sree Lakshmi		10.535280	76.213127	**OH**	Racoon		6.33		6.33
AB-Sree	2-Sreelakshmi Silks	Sreelakshmi Silks	LT	10.535189	76.213059	**UG**	XLPE	150	12.52	40	52.52

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P1	P2	Post		10.535441	76.213146	**OH**	Racoon				0
P2	AB-Daffodils	AB		10.536055	76.213150	**OH**	Racoon		79.58		79.58
AB-Daffodils	G5	Ground		10.536081	76.213142	**UG**	XLPE	150			0
G5	G6	Ground		10.536057	76.212907	**UG**	XLPE	150			0
G6	03- Daffodils	Daffodils	LT	10.536280	76.212880	**UG**	XLPE	150	53.14		53.14
P1	AB-Rukmani1	AB		10.535360	76.212459	**OH**	Racoon		74.51		74.51
AB-Rukmai1	G10	Ground		10.535359	76.212212	**UG**	XLPE	300			0
G10	AB-Ruku	AB		10.534427	76.212201	**UG**	XLPE	300	132.19	5	137.19
AB-Ruku	26	Rukmani Temple Park	LT	10.534266	76.212454	**UG**	XLPE	150	32.92	15	47.92
AB-Rukmai1	P5, 4- Karthayani	Post, Karthayani	LT	10.535365	76.212067	**OH**	Racoon		43.21		43.21
P5	AB, 23- K.R Bakery	K.R Bakery	LT	10.535502	76.212076	**OH**	Racoon		16.52		16.52
P5	G11	Ground		10.535356	76.211946	**UG**	XLPE	150			0
G11	G12	Ground		10.535035	76.211949	**UG**	XLPE	150			0
G12	5-Pazhoor Arcades	Pazhoor Arcades	LT	10.534924	76.212057	**UG**	XLPE	150	64.81		64.81
P5	ABL51503	AB		10.535290	76.211750	**OH**	Racoon		34.81		34.81
ABL51503	P6-1	Post		10.535363	76.211656	**OH**	Racoon				0
P6-1	P6	Post		10.535337	76.211394	**OH**	Racoon		47.69		47.69
P6	P7	Post		10.535305	76.211192	**OH**	Racoon				0
P7	P8	Post		10.535304	76.210928	**OH**	Racoon		46.8		46.8
P8	G13	Ground		10.535326	76.210625	**UG**	XLPE				0
G13	21-Saraswathy	Saraswathy	LT	10.535447	76.210615	**UG**	XLPE	300	49.95		49.95
P8	P9	Post		10.535319	76.209827	**OH**	Racoon			125.36	125.36
P9	22 -Unique Ardent	Unique Ardent	LT	10.535463	76.209744	**UG**	XLPE	150	23.24	5	28.24

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P9	ABI50903	AB		10.535324	76.209518	**OH**	Racoon		28.53		28.53
P6	AB-Panikath, RMU31504	AB, RMU		10.535694	76.211515	**OH**	Racoon		44.75		44.75
RMU31504	49-Panikath Mall	Panikath Mall	LT	10.535755	76.211320	**UG**	XLPE	185	22.38	25	47.38
AB-Panikath	P39	Post		10.536430	76.211975	**OH**	Racoon				0
P39	P40	Post		10.536711	76.212055	**OH**	Racoon				0
P40	P41, 18-Varnam	Post/Varnam	LT	10.537105	76.212019	**OH**	Racoon		171.8		171.8
P41	P42	Post		10.537232	76.212017	**OH**	Racoon		14.05		14.05
P42	19-Omega Panthlon	Omega Panthlon	LT	10.537190	76.211716	**UG**	XLPE	185	33.27	10	43.27
P42	P43	Post		10.537421	76.212006	**OH**	Racoon		20.94		20.94
P43	RMU31505	RMU		10.537422	76.211972	**UG**	XLPE	300	3.72		3.72
RMU31505	43-Prasad Arcade	Prasad Arcade	LT	10.537428	76.211929	**UG**	XLPE	300	4.76	25	29.76
RMU31505	RMU31506	RMU		10.537224	76.212110	**UG**	XLPE	300			0
RMU31506	48-CKM Heights	CKM Heights	LT	10.537127	76.212224	**UG**	XLPE	300	55.06	30	85.06
P43	P45	Post		10.538000	76.212016	**OH**	Racoon		64.05		64.05
P45	G46	Ground		10.538033	76.211330	**UG**	XLPE	300			0
G46	G47	Ground		10.538166	76.211151	**UG**	XLPE	300			0
G47	G48	Ground		10.538509	76.211107	**UG**	XLPE	300			0
G48	G49	Ground		10.538548	76.210785	**UG**	XLPE	300			0
G49	G50	Ground		10.539008	76.210873	**UG**	XLPE	300			0
G50	20-Nandhanam	Nandhanam	LT	10.539011	76.210180	**UG**	XLPE	300	301.95	10	311.95
ABL51503	P10	Post		10.535146	76.211513	**UG**	XLPE	300			0
P10	G14	Ground		10.534919	76.211464	**UG**	XLPE	300			0
G14	G15	Ground		10.534555	76.211461	**UG**	XLPE	300			0
G15	P11	Post		10.534539	76.211384	**UG**	XLPE	300	106.31	80	186.31

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P11	P38	Post		10.534848	76.211409	**OH**	Racoon				0
P38	6-Kasturi	Kasturi (Bhramasam Madam)	LT	10.534838	76.211515	**OH**	Racoon		45.94		45.94
P11	G16	Ground		10.534562	76.211042	**UG**	XLPE				0
G16	G17	Ground		10.534500	76.210738	**UG**	XLPE				0
G17	7-Sreepriya	Sreepriya	LT	10.534474	76.210642	**UG**	XLPE	300	82.63	27	109.63
P11	P12	Post		10.534044	76.211321	**OH**	Racoon		55.07		55.07
P12	RMU31507	RMU		10.534086	76.211424	**UG**	XLPE	300	11.25	10	21.25
RMU31507	42-Thrissur Service Coperative Bank	Thrissur Service Coperative Bank	HT	10.534001	76.211658	**UG**	XLPE	185	27.28	5	32.28
P12	P13	Post		10.533857	76.211321	**OH**	Racoon		21.86		21.86
P13	AB-Krishna	AB		10.533834	76.211275	**OH**	Racoon		3.74		3.74
AB-Krishna	51-Capital Krishna	Capital Krishna	LT	10.533834	76.211030	**UG**	XLPE	150	26.82	7	33.82
P13	P14	Post		10.533494	76.211287	**OH**	Racoon		39.19		39.19
P14	P15	Post		10.533371	76.211138	**OH**	Racoon				0
P15	P16	Post		10.533361	76.210934	**OH**	Racoon		44.78		44.78
P16	9-Forus Mathura	Forus Mathura	LT	10.533326	76.210930	**OH**	Racoon		2.78		2.78
P16	G18	Ground		10.533345	76.210194	**UG**	XLPE				0
G18	G19	Ground		10.533335	76.209948	**UG**	XLPE				0
G19	AB-MRG	AB-MRG Sree Valstam		10.533346	76.209556	**UG**	XLPE	300	151.01	17	168.01
AB-MRG	40 - MRG Sree Valstam	MRG Sree Valstam	LT	10.533188	76.209505	**UG**	XLPE	150	18.35	7	25.35
P14	P17	Post		10.533027	76.211313	**OH**	Racoon		51.73		51.73
P17	AB-AR	AB-AR Tower		10.533183	76.211270	**OH**	Racoon		17.89		17.89
AB-AR	27-A.R. Tower	A R Tower	LT	10.533111	76.211209	**UG**	XLPE	150	10.39	10	20.39
P17	P18	Post		10.532747	76.211321	**OH**	Racoon		30.98		30.98
P18	8	Krishna(Thiruvambadi-2)	LT	10.532713	76.211394	**OH**	Racoon		8.83		8.83

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P18	P19	Post		10.532410	76.211320	**OH**	Racoon		37.28		37.28
P19	28-Friends Mall	Friends Mall	LT	10.532439	76.211428	**OH**	Racoon		12.25		12.25
P19	ABL51504	AB		10.532204	76.211308	**OH**	Racoon		22.82		22.82
ABL51504	RMU31508	RMU		10.531837	76.211354	**UG**	XLPE	300			0
RMU31508	47-Oushadhi Panchakarma	Oushadhi Panchakarma	HT	10.531810	76.211423	**UG**	XLPE	300	60.62	20	80.62
ABL51504	P20	Post		10.531825	76.211261	**OH**	Racoon				0
P20	P21	Post		10.531502	76.211285	**OH**	Racoon		78.06		78.06
P21	P22	Post		10.531118	76.211380	**OH**	Racoon		44.69		44.69
P22	P23, 11-Oushadhi	Oushadhi	LT	10.531137	76.211653	**OH**	Racoon		31.54		31.54
P23	RMU31509	RMU		10.531134	76.211604	**UG**	XLPE	300	5.37	12	17.37
RMU31509	G20	Ground		10.531110	76.211372	**UG**	XLPE	300			0
G20	G21	Ground		10.531420	76.211300	**UG**	XLPE				0
G21	G22	Ground		10.531624	76.211243	**UG**	XLPE				0
G22	41-Top Tower	Top Tower	LT	10.531572	76.210898	**UG**	XLPE	300	125.97	20	145.97
RMU31509	G29	Ground		10.531147	76.213005	**UG**	XLPE	300			0
G29	G30	Ground		10.531152	76.214519	**UG**	XLPE	300			0
G30	RMU31510	RMU		10.531392	76.214558	**UG**	XLPE	300			0
RMU31510	44	Kalyan Hypermarket	HT	10.531569	76.214622	**UG**	XLPE	300	372.87	30	402.87
P23	G20	Ground		10.531110	76.211372	**UG**	XLPE	300			0
G20	G21	Ground		10.531420	76.211300	**UG**	XLPE				0
G21	G23	Ground		10.531849	76.211248	**UG**	XLPE				0
G23	G24	Ground		10.532051	76.210712	**UG**	XLPE				0
G24	G25	Ground		10.532151	76.210608	**UG**	XLPE				0
G25	G26	Ground		10.532276	76.210085	**UG**	XLPE				0

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
G26	G27	Ground		10.532309	76.210146	**UG**	XLPE				0
G27	P24	Post		10.533034	76.210120	**UG**	XLPE	300	331.79	10	341.79
P24	10	Thiruvambadi(Lekshmi)	LT	10.533034	76.210133	**OH**	Racoon		1.42		1.42
P24	G28	Ground		10.532486	76.210111	**UG**	XLPE	300			0
G28	24-Narayani	Narayani	LT	10.532437	76.210025	**UG**	XLPE	300	74.28	27	101.28
P22	P25	Post		10.530537	76.211480	**OH**	Racoon		63.17		63.17
P25	34- K.A Kumaran	K.A Kumaran	LT	10.530561	76.211584	**OH**	Racoon		9.55		9.55
P25	P26	Post		10.529469	76.211775	**OH**	Racoon				0
P26	P27	Post		10.529221	76.211838	**OH**	Racoon		151.68		151.68
P27	G31	Ground		10.529309	76.211808	**UG**	XLPE	300			0
G31	AB-Saroja	AB		10.529252	76.211497	**UG**	XLPE				0
AB-Saroja	25- Saroja	Saroja	HT	10.529209	76.211353	**UG**	XLPE	300	59.31	30	89.31
P27	P28	Post		10.528352	76.212106	**OH**	Racoon				0
P28	P29	Post		10.527754	76.212235	**OH**	Racoon				0
P29	ABL51505	AB		10.527750	76.212203	**OH**	Racoon		171.71		171.71
ABL51505	P30	Post		10.527691	76.211899	**UG**	XLPE	300	33.91	12	45.91
P30	12-Suharsha	Suharsha	LT	10.527802	76.211990	**UG**	XLPE	150	15.81	10	25.81
P30	G32	Ground		10.527776	76.211485	**UG**	XLPE	300			0
G32	RMU31511	RMU		10.527492	76.211395	**UG**	XLPE	300	72.82	15	87.82
RMU31511	50	Coperative Hospital	HT	10.527558	76.211451	**UG**	XLPE	300	9.53	30	39.53
RMU31511	AB-Coperative	AB		10.527447	76.211388	**UG**	XLPE	300	5.04	10	15.04
AB-Coperative	13	Coperative Hospital	LT	10.527462	76.211391	**OH**	Racoon		1.69		1.69
AB-Coperative	G33	Ground		10.527325	76.211332	**UG**	XLPE	300			0
G33	P31	Post		10.526755	76.211249	**UG**	XLPE	300	81.82	20	101.82

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P31	P32	Post		10.526681	76.211499	**OH**	Racoon		27.81		27.81
P32	AB-Athulya	AB		10.526493	76.211527	**UG**	XLPE	300			0
AB-Athulya	16-Athulya Chundari	Athulya Chundari	LT	10.526437	76.211437	**UG**	XLPE	300	32.82		32.82
P32	P33	Post		10.526654	76.211652	**OH**	Racoon		17.01		17.01
P33	G34	Ground		10.526620	76.211739	**UG**	XLPE	300			0
G34	G35	Ground		10.526438	76.211747	**UG**	XLPE	300			0
G35	G36	Ground		10.526376	76.211712	**UG**	XLPE	300			0
G36	G37	Ground		10.526357	76.211587	**UG**	XLPE	300			0
G37	G38	Ground		10.525998	76.211592	**UG**	XLPE	300			0
G38	G39	Ground		10.525996	76.211637	**UG**	XLPE	300			0
G39	LBS	LBS		10.525804	76.211084	**UG**	XLPE	300	166.19		166.19
LBS	14-City Centre 1	City Centre 1	LT	10.525785	76.211087	**UG**	XLPE	150	2.68		2.68
LBS	15-City Centre 2	City Centre 2	LT	10.525840	76.211080	**UG**	XLPE	150	4.42	8	12.42
P31	ABL51506	AB		10.526780	76.210751	**OH**	Racoon		54.84		54.84
ABL51506	G40	Ground		10.527703	76.210718	**UG**	XLPE	300			0
G40	G41	Ground		10.528060	76.210860	**UG**	XLPE				0
G41	39-Alukkas Nest	Alukkas Nest	LT	10.527986	76.210965	**UG**	XLPE	300	159.31		159.31
ABL51506	33-Malabar Eye Clinic	Malabar Eye Clinic	LT	10.526870	76.210444	**OH**	Racoon		35.05		35.05
ABL51506	G42	Ground		10.526747	76.210648	**UG**	XLPE	300			0
G42	G43	Ground		10.526233	76.210630	**UG**	XLPE				0
G43	G44	Ground		10.525134	76.210667	**UG**	XLPE	300			0
G44	AB-Shivam	AB		10.525158	76.210847	**UG**	XLPE	300	207.78	10	217.78
AB-Shivam	17-Shivam	Shivam		10.525080	76.210919	**UG**	XLPE	300	11.69	30	41.69
AB-Shivam	P34	Post		10.525152	76.210670	**UG**	XLPE	300	19.39	10	29.39
P34	P35	Post		10.524674	76.210693	**OH**	Racoon		52.93		52.93

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P35	29-Ramdas Theatre	Ramdas Theatre	HT	10.524432	76.210736	**UG**	XLPE	300	30.92	5	35.92
P35	AB-Pen	AB		10.524647	76.210686	**OH**	Racoon		3.08		3.08
AB-Pen	30-Peninsula	Peninsula	HT	10.524161	76.210655	**UG**	XLPE	150	53.86	75	128.86
P35	G45	Ground		10.524632	76.210242	**UG**	XLPE	300			0
G45	ABI50808	AB		10.523928	76.210241	**UG**	XLPE	300	130.61	7	137.61
P34	P36	Post		10.525399	76.210645	**OH**	Racoon		27.46		27.46
P36	P36-1	AB		10.525436	76.210713	**OH**	Racoon		8.49		8.49
P36-1	31-Wintage Royal	Wintage Royal	LT	10.525355	76.210795	**UG**	XLPE	185	12.68	50	62.68
P36	P37	Post		10.525881	76.210646	**OH**	Racoon		53.31		53.31
P37	37-Top Heritage	Top Heritage	LT	10.525845	76.210826	**UG**	XLPE	150	20.1	20	40.1
P37	P37-1	AB		10.525819	76.210579	**OH**	Racoon		10.04		10.04
P37-1	38-Forus Cosynest	Forus Cosynest	LT	10.525893	76.210456	**UG**	XLPE	150	15.76	20	35.76
P33	RMUvishram, 51 (C)	RMU, Vishram Aura Business Tower	LT	10.526685	76.2	UG	XLPE	300	31	5	36
RMU Vishram	52 (C)	RMU, Temple Square	LT	10.526707	76.2	UG	XLPE	300	20	5	25

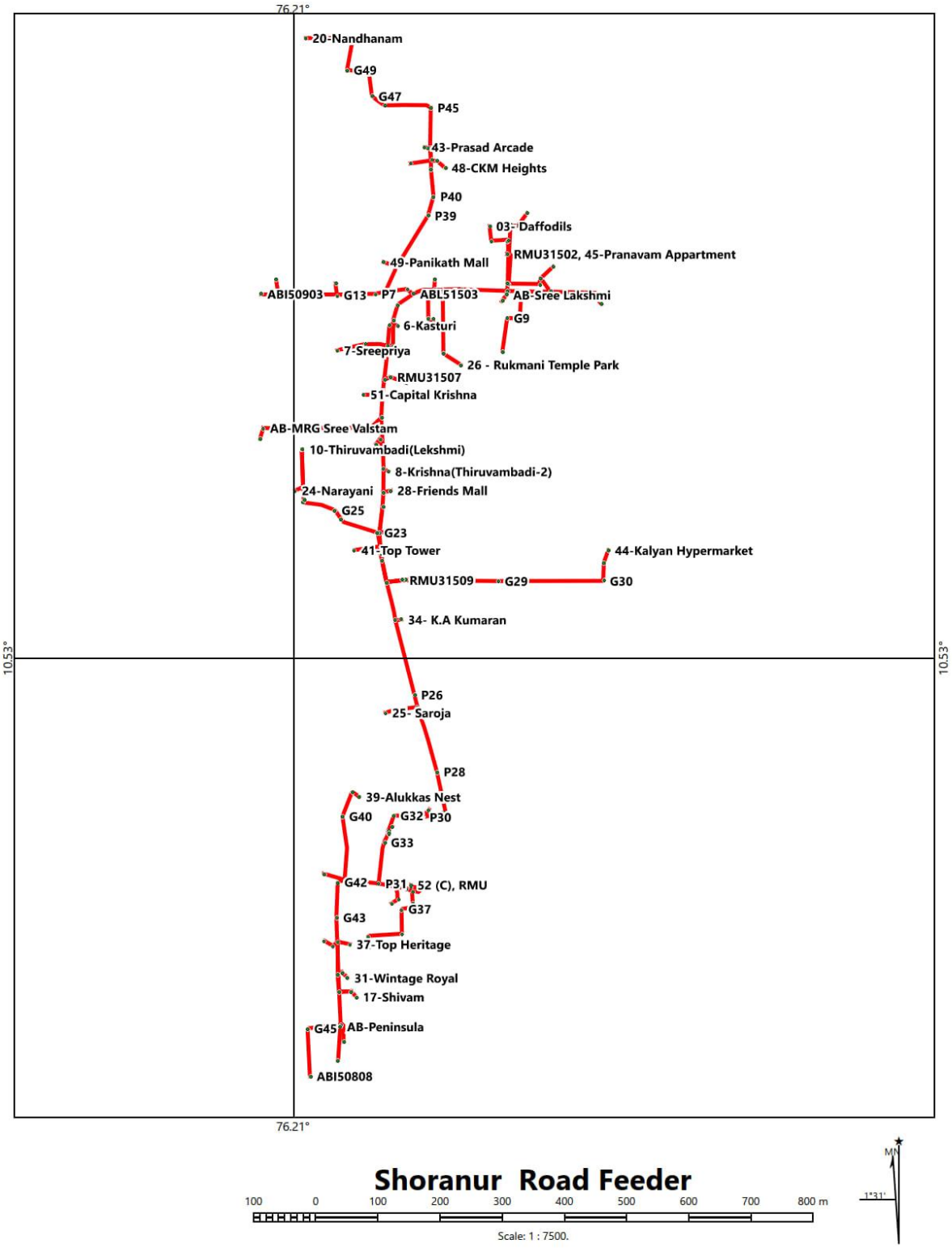

Figure 16: Shornur road feeder

16. DISTRICT HOSPITAL FEEDER

The following table shows the 11-kV line distance in the District Hospital feeder

Table 30: HT line distance –District Hospital feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
ss		Substation		10.535032	76.21468							
ss	P1	Post		10.535169	76.21482	**UG**	XLPE	300	1		32	32
P1	G1	Ground		10.535167	76.214897	**UG**	XLPE	300	1			0
G1	G2	Ground		10.534993	76.215005	**UG**	XLPE	300	1			0
G2	P2	Post		10.533756	76.215037	**UG**	XLPE	300	1			0
P2	G3	Ground		10.533433	76.21523	**UG**	XLPE	300	1			0
G3	G4	Ground		10.533434	76.215886	**UG**	XLPE	300	1			0
G4	G5	Ground		10.533072	76.216439	**UG**	XLPE	300	1			0
G5	P3	Post		10.532964	76.216742	**UG**	XLPE	300	1		20	20
P3	G6	Ground		10.53297	76.217114	**UG**	XLPE	300	1			0
G6	G7	Ground		10.530994	76.217077	**UG**	XLPE	300	1			0
G7	G8	Ground		10.530878	76.21771	**UG**	XLPE	300	1			0
G8	G9	Ground		10.530907	76.217979	**UG**	XLPE	300	1			0
G9	G10	Ground		10.5308143	76.218087	**UG**	XLPE	300	1			0
G10	P4	Post		10.530785	76.218877	**UG**	XLPE	300	1		20	20
P4	G11	Ground		10.530781	76.219309	**UG**	XLPE	300	1			0
G11	ABL51602	ABL		10.529775	76.219311	**UG**	XLPE	300	1	1047.65	30	1077.7
ABL51602	37	Kerala Water Authority	LT	10.529766	76.21927	**UG**	XLPE	300	1	5.28	10	15.28
ABL51602	P5	Post		10.529734	76.219399	**OH**	Racoon			7.77		7.77
P5	ABI51403	ABI		10.529898	76.219402	**OH**	Racoon			18.14		18.14
P5	P6	Post		10.529543	76.219389	**OH**	Racoon					0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P6	P7	Post		10.52894	76.219413	**OH**	Racoon			87.91		87.91
P7	AB Vyapari	AB		10.528954	76.219332	**OH**	Racoon			9		9
AB Vyapari	RMU31601	RMU		10.528751	76.219349	**UG**	XLPE	300	1	22.53	7	29.53
RMU31601	36	Vyapari Vyavasai	LT	10.528773	76.219132	**UG**	XLPE	150	1	23.88	9	32.88
AB Vyapari	G12	Ground		10.52893	76.218989	**UG**	XLPE	300	1			0
G12	31-Good Will	Good Will	HT	10.528682	76.218984	**UG**	XLPE	300	1	66.33	5	71.33
P7	P8	Post		10.528216	76.219522	**OH**	Racoon			80.97		80.97
P8	P9	Post		10.528208	76.220178	**OH**	Racoon					0
P9	AB Cheloor	AB		10.528206	76.220254	**OH**	Racoon			80.27		80.27
AB Cheloor	1	Cheloor Golden Enclave	LT	10.527912	76.220332	**UG**	XLPE	150	1	34.71	36	70.71
AB Cheloor	AB Fortune, 42-Classic Fortune	Classic Fortune	LT	10.528243	76.220823	**OH**	Racoon			62.21		62.21
AB Cheloor	AB Forus	AB		10.528220	76.220244	**OH**	Racoon			16.07		16.07
AB Forus	RMU Azalia	RMU		10.528220	76.220244	**UG**	XLPE	300			20	20
RMU Azalia	Forus Azalia	Forus Azalia(NEW T /F)	LT	10.528096	76.220131	**UG**	XLPE	300		18.47	15	33.47
AB Fortune	G13	Ground		10.528235	76.221326	**UG**	XLPE	300	1			0
G13	G14	Ground		10.529097	76.221347	**UG**	XLPE	300	1			0
G14	G15	Ground		10.529258	76.221347	**UG**	XLPE	300	1			0
G15	5-Exchange	Exchange (Chembukavu Feeder)		10.529155	76.221823	**UG**	XLPE	300	1	212.25	5	217.25
P8	P9-1	Post		10.527585	76.219584	**OH**	Racoon					0
P9-1	AB MY	AB Menachery		10.527106	76.219684	**OH**	Racoon			124.23		124.23

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB MY	G16	Ground		10.527007	76.219705	**UG**	XLPE	300	1			0
G16	3	Menachery	LT	10.527015	76.219974	**UG**	XLPE	300	1	40.65	10	50.65
AB MY	P10	Post		10.52655	76.219774	**OH**	Racoon			62.28		62.28
P10	P11	Post		10.526486	76.219836	**OH**	Racoon					0
P11	P12	Post		10.526488	76.220605	**OH**	Racoon			93.98		93.98
P12	AB Ch	AB Cheloor		10.526434	76.2206	**OH**	Racoon			6		6
AB Ch	4	Cheloor Platinum Heights	LT	10.526155	76.220659	**UG**	XLPE	300	1	31.53	10	41.53
P12	G17	Ground		10.526523	76.220969	**UG**	XLPE	300	1			0
G17	G18	Ground		10.526588	76.221401	**UG**	XLPE	300	1			0
G18	G19	Ground		10.526474	76.22142	**UG**	XLPE	300	1			0
G19	G20	Ground		10.526153	76.221338	**UG**	XLPE	300	1			0
G20	G21	Ground		10.525393	76.221108	**UG**	XLPE	300	1			0
G21	G22	Ground		10.525372	76.220707	**UG**	XLPE	300	1			0
G22	RMU31602	RMU		10.525277	76.220728	**UG**	XLPE	300	1	279.23		279.23
RMU31602	41	Alfa Breeza	LT	10.525274	76.220582	**UG**	XLPE	150	1	15.98	15	30.98
P10	P13	Post		10.526119	76.219886	**OH**	Racoon					0
P13	P14	Post		10.525563	76.219987	**OH**	Racoon					0
P14	P15	Post		10.525247	76.220039	**OH**	Racoon			147.12		147.12
P15	AB Navani	AB		10.525252	76.220062	**OH**	Racoon			2.58		2.58
AB Navani	5-Navani	Navani	LT	10.52513	76.220258	**UG**	XLPE	150	1	25.35	35	60.35
P15	P16	Post		10.524683	76.220058	**OH**	Racoon					0
P16	ABL51603, P17	ABL		10.524238	76.220063	**OH**	Racoon			111.64		111.64
P17	AB CSB, 6-CSB	CSB		10.52423	76.219961	**OH**	Racoon			11.2		11.2

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
ABL51603	P18	Post		10.523344	76.220114	**OH**	Racoon					0
P18	P19	Post		10.523339	76.220133	**OH**	Racoon			101.2		101.2
P19	ABI51604	ABI		10.523315	76.220583	**OH**	Racoon			49.33		49.33
ABI51604	G23	Ground		10.52332	76.220634	**UG**	XLPE	300	1			0
G23	AB Skyline	AB		10.523988	76.220769	**UG**	XLPE	300	1	82.72	7	89.72
AB Skyline	9-Sky line	Sky line	LT	10.524008	76.220519	**UG**	XLPE	185	1	27.45	40	67.45
AB Skyline	P20	Post		10.524006	76.220825	**OH**	Racoon					0
P20	P20-1	Post		10.524272	76.22098	**OH**	Racoon					0
P20	P21	Post		10.52442	76.22103	**OH**	Racoon					0
P21	AB Lalitha	AB		10.524462	76.221069	**OH**	Racoon			63.98		63.98
AB Lalitha	10-Lalitha Heights	Lalitha Heights	LT	10.524604	76.221079	**UG**	XLPE	150	1	15.74	15	30.74
P19	P22	Post		10.523354	76.219751	**OH**	Racoon					0
P22	P23	Post		10.523375	76.219537	**OH**	Racoon			65.39		65.39
P23	RMU st. Thomas	RMU		10.523439	76.21953	**UG**	XLPE	300	1	7.12	5	12.12
RMU st. Thomas	St. Thomas	St. Thomas	HT	10.523412	76.219395	**UG**	XLPE	300	1	15.08	9	24.08
RMU st. Thomas	P24	Post		10.523463	76.219564	**UG**	XLPE	300	1	4.57	10	14.57
P24	P25	Post		10.52379	76.219537	**OH**	Racoon			36.29		36.29
P25	AB CSB	AB		10.523717	76.219634	**OH**	Racoon			13.34		13.34
AB CSB	32- CSB	CSB	HT	10.523723	76.220002	**UG**	XLPE	150	1	40.29	5	45.29
P25	P26	Post		10.524066	76.219449	**OH**	Racoon					0
P26	P27	Post		10.524635	76.219249	**OH**	Racoon			98.65		98.65
P27	AB Navani	AB		10.524644	76.219215	**OH**	Racoon			3.85		3.85
AB Navani	8-Navani	Navani	LT	10.524701	76.21875	**UG**	XLPE	150	1	51.29	100	151.29

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P27	P28	Post		10.524851	76.219216	**OH**	Racoon					0
P28	P29	Post		10.525396	76.219117	**OH**	Racoon					0
P29	AB St.mary's	AB		10.525391	76.219075	**OH**	Racoon			90.04		90.04
AB St.mary's	7- St. Mary's College	St. Mary's College	HT	10.52544	76.219054	**UG**	XLPE	150	1	5.89	25	30.89
P23	ABL51606	ABL		10.523428	76.217766	**OH**	Racoon			194.03		194.03
ABL51606	RMU31603	RMU		10.523277	76.217551	**UG**	XLPE	300	1	28.86	60	88.86
RMU31603	11-DH College Road	DH College Road	LT	10.523287	76.217569	**UG**	XLPE	300	1	3	10	13
RMU31603	39- DH Solar	DH Solar	LT	10.523288	76.217547	**UG**	XLPE	300	1	3.44	10	13.44
ABL51606	ABL51605	ABL		10.52341	76.217018	**OH**	Racoon					0
ABL51605	P30	Post		10.523441	76.216915	**OH**	Racoon					0
P30	ABI51108	ABI		10.523708	76.216893	**OH**	Racoon			124.23		124.23
RMU31603	RMU31604	RMU		10.522605	76.216937	**UG**	XLPE	300	1	139.26		139.26
RMU31604	RMU31605	RMU		10.522602	76.216913	**UG**	XLPE	300	1	2.65		2.65
RMU31605	12	Dt.HS Palakkal	LT	10.522598	76.216952	**UG**	XLPE	300	1	4.29		4.29
RMU31605	13	Dt.HS Palakkal	LT	10.522602	76.216966	**UG**	XLPE	300	1	5.8		5.8
RMU31604	35-Josco	Josco	HT	10.522375	76.217179	**UG**	XLPE	300	1	36.73	20	56.73
RMU31604	ABL51607	ABL(8-Pole)		10.522852	76.216642	**UG**	XLPE	300	1	50.3	20	70.3
ABL51607	ABL51609	ABL		10.52289	76.21661	**OH**	Racoon			8.84		8.84
ABL51609	RMU31606	RMU		10.522594	76.216883	**UG**	XLPE	300	1		70	70
RMU31606	40- DH	DH	HT	10.522681	76.217206	**UG**	XLPE	300	1	81.58	20	101.58

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
RMU31605	G45	Ground		10.522541	76.216843	**UG**	XLPE	300	1		20	20
G45	P41	Post		10.52212	76.216784	**UG**	XLPE	300	1			0
P41	G46	Ground		10.522067	76.215925	**UG**	XLPE	300	1			0
G46	RMU31607	RMU		10.522099	76.215927	**UG**	XLPE	300	1			0
RMU31607	19-	Chemmanur coperative Office	HT	10.522215	76.215907	**UG**	XLPE	300	1	174.98	20	194.98
RMU31604	AB SIB	AB		10.522871	76.216577	**UG**	XLPE	240	1			0
AB SIB	18- SIB	SIB	HT	10.522302	76.216145	**UG**	XLPE	240	1	128.05	70	198.05
ABL51607	15	8 Pole 2	LT	10.52286	76.21662	**OH**	Racoon			7.81		7.81
ABL51607	16	8 Pole 3	LT	10.522866	76.216585	**OH**	Racoon			4.3		4.3
ABL51607	14,	ABL516088 Pole 1	LT	10.522861	76.216566	**OH**	Racoon			2.22		2.22
ABL51607	17	8 Pole 4	LT	10.522867	76.216524	**OH**	Racoon			2.25		2.25
ABL51607	ABI51203	ABI		10.52286	76.21662	**OH**	Racoon			7.81		7.81
ABL51608	G47	Ground		10.522667	76.216523	**UG**	XLPE	300	1			0
G47	G48	Ground		10.52254	76.214984	**UG**	XLPE	300	1			0
G48	G49	Ground		10.522604	76.214463	**UG**	XLPE	300	1			0
G49	G50	Ground		10.522413	76.214479	**UG**	XLPE	300	1			0
G50	G51	Ground		10.522065	76.214515	**UG**	XLPE	300	1			0
G51	21	AB, Fashion Fabrics	LT	10.521462	76.214623	**UG**	XLPE	300	1	373.52		373.52
AB fashion	AB Elite	AB		10.5215	76.214596	**OH**	Racoon			5.47		5.47
AB Elite	20-	Elite Saree	HT	10.521528	76.214767	**UG**	XLPE	300	1	18.97	15	33.97
RMU31604	G24	Ground		10.522571	76.216859	**UG**	XLPE	300	1			0
G24	G25	Ground		10.522487	76.216841	**UG**	XLPE	300	1			0
G25	G26	Ground		10.521876	76.216855	**UG**	XLPE	300	1			0
G26	G27	Ground		10.521967	76.217535	**UG**	XLPE	300	1			0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
G27	P31, 22-	Ariyagadi	LT	10.521823	76.217562	**UG**	XLPE	300	1	179.3	10	189.3
P31	G28	Ground		10.521535	76.217579	**UG**	XLPE	300	1			0
G28	G29	Ground		10.521246	76.217578	**UG**	XLPE	300	1			0
G29	G30	Ground		10.52116	76.217545	**UG**	XLPE	300	1			0
G30	G34	Ground		10.521	76.217406	**UG**	XLPE	300	1			0
G34	G35	Ground		10.520539	76.217434	**UG**	XLPE	300	1			0
G35	G36	Ground		10.519356	76.217582	**UG**	XLPE	300	1			0
G36	P39, 23,	Kuttans, ABL51612	LT	10.519303	76.21768	**UG**	XLPE	300	1	299.44		299.44
P39	G37	Ground		10.5194343	76.217882	**UG**	XLPE	300	1			0
G37	RMU31609, 3	Holy Space Shopping Complex	LT	10.519158	76.21792	**UG**	XLPE	300	1	43.58	10	53.58
P39	G38	Ground		10.519421	76.218297	**UG**	XLPE	300	1			0
G38	AB Holy ht	AB		10.519382	76.218312	**UG**	XLPE	300	1			0
AB holy ht	24	Holy Heights	LT	10.519074	76.218121	**UG**	XLPE	300	1	131.14	10	141.14
P39	G39	Ground		10.519279	76.217585	**UG**	XLPE	300	1			0
G39	G40	Ground		10.51921	76.21702	**UG**	XLPE	300	1			0
G40	P40	Post		10.51909	76.217043	**UG**	XLPE	300	1	85.76	10	95.76
P40	25	Erinjeri Ariyangadi 2	LT	10.518624	76.21708	**OH**	Racoon			49.91		49.91
P40	G41	Ground		10.519222	76.217034	**UG**	XLPE	300	1		10	10
G41	G42	Ground		10.519246	76.217	**UG**	XLPE	300	1			0
G42	G43	Ground		10.519732	76.216994	**UG**	XLPE	300	1			0
G43	G44	Ground		10.520466	76.216991	**UG**	XLPE	300	1			0
G44	ABL51613, 26	High Road	LT	10.520467	76.216897	**UG**	XLPE	300	1	166.77	10	176.77
ABL51613	RMU	RMU30204		10.520471	76.216853	**UG**	XLPE	300	1	4.84	20	24.84
P31	P32	Post		10.521971	76.217591	**OH**	Racoon					0

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (sq mm)	No of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P32	P33	Post		10.522064	76.2182	**OH**	Racoon					0
P33	P34	Post		10.522192	76.218879	**OH**	Racoon					0
P34	P35	Post		10.522335	76.219574	**OH**	Racoon			237.57		237.57
P35	ABI51610	ABI		10.521651	76.219472	**UG**	XLPE	300	1	76.48		76.48
P35	P36	Post		10.522419	76.220107	**OH**	Racoon			59.08		59.08
P36	LBS	LBS		10.52246	76.220099	**UG**	XLPE	300	1	4.62	10	14.62
LBS	29	CT Plaza	LT	10.522719	76.22011	**UG**	XLPE	150	1	28.67	15	43.67
P36	AB east	AB		10.52233	76.220224	**OH**	Racoon			16.15		16.15
AB east	27	East end plaza	LT	10.52179	76.220317	**UG**	XLPE	300	1	60.59	10	70.59
P36	P37	Post		10.522512	76.220607	**OH**	Racoon					0
P37	AB adam	AB		10.522553	76.220863	**OH**	Racoon			84.07		84.07
AB adam	28	Adam bazar	LT	10.521881	76.22077	**UG**	XLPE	300	1	88.94	10	98.94
AB adam	AB	AB Sadanan		10.522576	76.221005	**OH**	Racoon			15.75		15.75
AB Sadanan	33	Sadanadhan	LT	10.522869	76.220986	**UG**	XLPE	300	1	32.48	20	52.48
AB Sadanan	P38	Post		10.522729	76.221508	**OH**	Racoon			57.6		57.6
P38	AB Park	AB		10.522643	76.221542	**OH**	Racoon			10.21		10.21
AB Park	30	Park Land	LT	10.522555	76.221681	**UG**	XLPE	240	1	18.06	40	58.06
P38	G31	Ground		10.522848	76.221787	**UG**	XLPE	300	1			0
G31	G32	Ground		10.522762	76.221833	**UG**	XLPE	300	1			0
G32	RMU31608, 38	Shalimar Shopping Complex	LT	10.522423	76.221956	**UG**	XLPE	300	1	85.8	10	95.8
AB Sadhanm	AB gt	AB GT- AB Golden Tower		10.522621	76.221232	OH				25.34		25.34
AB gt	RMU Golden	RMU Golden Tower		10.522646	76.22123	UG		300				0
RMU Golden	44	TR West side 315KVA (Golden Tower)	HT	10.522825	76.221236	UG		300		22.59		22.59

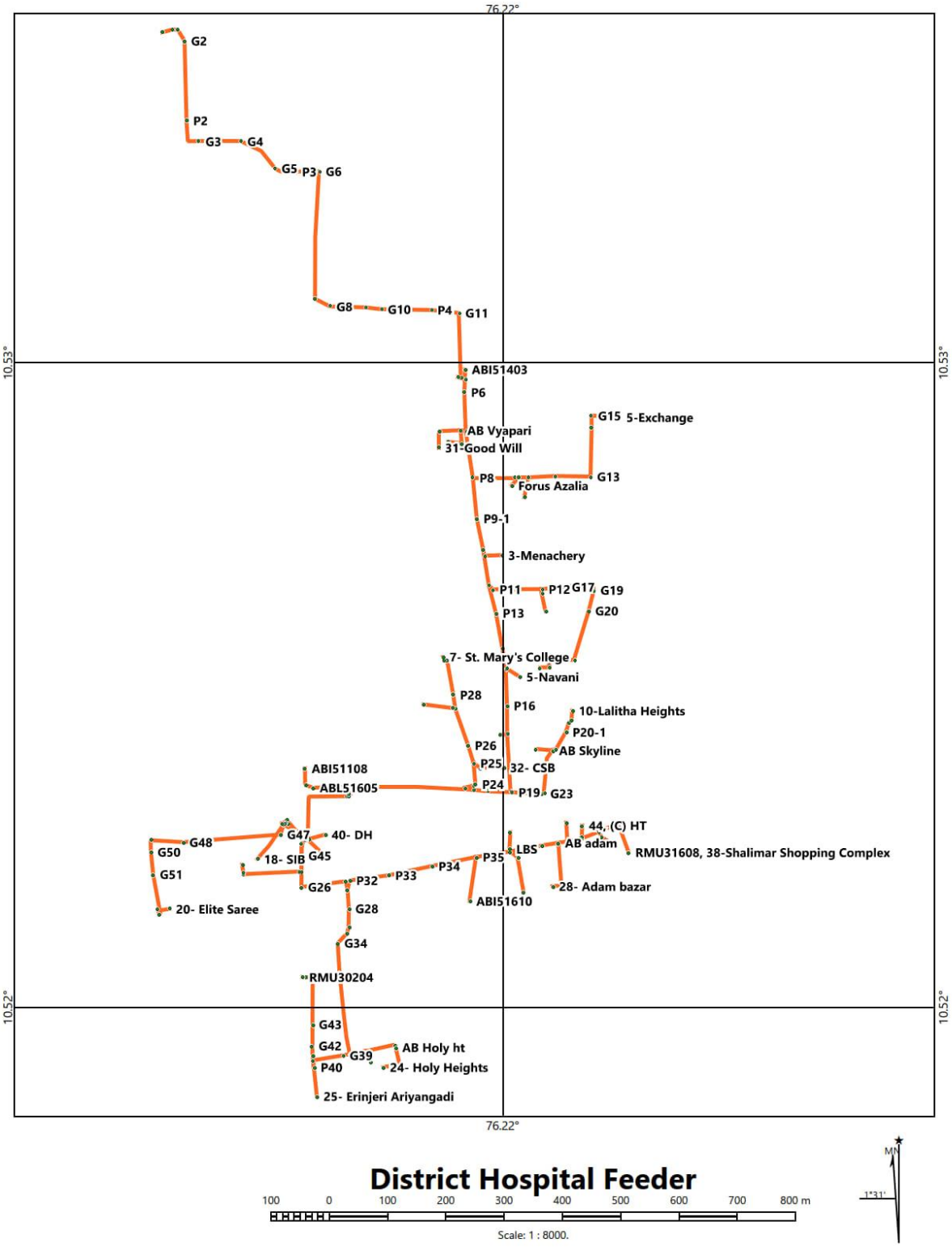

Figure 17: District Hospital feeder

17. EAST FORT FEEDER

The following table shows the 11-kV line distance in the East fort feeder.

Table 31: HT line distance – East fort feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
SS	2P	Substation feeder		10.535185	76.214764	**UG**	300		25	25
2P	G1	Ground		10.534967	76.215221	**UG**				0
G1	G2	Ground		10.533556	76.215243	**UG**				0
G2	G2-1	Ground		10.533400	76.21523	**UG**				0
G2-1	G2-2	Ground		10.53342	76.21589	**UG**				0
G2-2	G2-3	Ground		10.53323	76.21627	**UG**				0
G2	G3	Ground		10.532946	76.216472	**UG**				0
G3	P1	Post (2 Pole)		10.532962	76.216747	**UG**	300		10	10
P1	G4	Ground		10.532924	76.217225	**UG**				0
G4	G4-1	Ground		10.53312	76.21738	**UG**				0
G4-1	G4-2	Ground		10.53287	76.2191	**UG**				0
G4-2	G4-3	Ground		10.53274	76.21957	**UG**				0
G4-3	P2	Post (2 Pole)		10.532900	76.219594	**UG**	300		10	10
P2	G4-4	Ground		10.53283	76.21958	**UG**				0
G4-4	G5	Ground		10.532100	76.224381	**UG**				0
G5	G6	Ground		10.531829	76.226241	**UG**				0
G6	P3	Post(2 Pole)		10.530592	76.226214	**UG**	300		10	10
P3	G6-1	Ground		10.529120	76.22618	**UG**				0
G6-1	AB1	ABL 51702		10.521957	76.225890	**UG**	300	2590	55	2645
AB1	P4	Post		10.521644	76.225868	**OH**		35.07		35.07
P4	AB2	ABI50104		10.521295	76.225861	**OH**		38.45		38.45

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
ABI50104	G12	Ground		10.521256	76.225075	**UG**				0
G12	RMU1/22	RMU31708, East Avenue	LT	10.521319	76.225052	**UG**	300	93.55		93.55
RMU1	G13	Ground		10.521291	76.225548	**UG**				0
G13	RMU2/15	RMU31709, Navya Bakery	HT	10.521329	76.225487	**UG**	300	57.58		57.58
P4	AB3	ABL51705		10.521868	76.225349	**OH**		64.38		64.38
ABL51705	10	Sun Tower	LT	10.522057	76.225372	**UG**	300	21.06	7	28.06
ABL51705	32	E P Jose Commercial Building	LT	10.521747	76.225340	**OH**		13.42		13.42
ABL51705	G7	Ground		10.521932	76.225158	**UG**				0
G7	G8	Ground		10.522397	76.224891	**UG**				0
G8	P16	ABL Selex Mall		10.522444	76.224764	**UG**				0
P16	Selex Mall			10.522863	76.224550	**UG**	300	150.01	7	157.01
ABL51705	AB6	ABL 51706		10.521605	76.224235	**OH**		125.85		125.85
ABL 51706	G11	Ground		10.522369	76.224089	**UG**				0
G11	11	Sindhooram Apartment	LT	10.522313	76.223704	**UG**	300	131.97	5	136.97
ABL 51706	P11	Post		10.521541	76.223908	**OH**		36.49		36.49
P11	1	Thomson Casa	LT	10.521514	76.223921	**UG**	300	3.31	10	13.31
P11	P12, 12	Pallikulam	LT	10.521295	76.22264	**OH**		141.44		141.44
P12	P13	Post		10.521248	76.221944	**OH**		76.36		76.36
P13	P23,33	AB-Chaldian, Chaldian	LT	10.521223	76.22196	**OH**		3.52		3.52
P13	P13-1	Post		10.521246	76.221521	**OH**				0
P13-1	34	Brothers Lane	LT	10.520909	76.221433	**OH**		85.79		85.79
P13	P14	Post		10.521225	76.220351	**OH**				0
P14	P14-1, 13	Sakthan Tower	LT	10.521234	76.220207	**OH**		190.14		190.14
P14-1	AB7	ABL51707		10.521199	76.219330	**OH**		92.24		92.24

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB7	P15	Post		10.521578	76.218757	**OH**				0
P15	P15-1, 14	Post/Puthenpally	LT	10.521453	76.218811	**OH**		134.02		134.02
P15-1	RMU7,17	RMU31707, P I Babu	LT	10.521527	76.218937	**UG**	300	24.38		24.38
ABL51707	AB8	ABI 51611		10.521603	76.219432	**UG**		44.99		44.99
ABL 51702	P5	Post		10.522575	76.225910	**OH**		74.53		74.53
P5	AB4/04	ABL51704/Spoon (City Castle)	LT	10.522825	76.225582	**OH**		40.88		40.88
ABL51704	G9	Ground		10.522925	76.225207	**UG**	300			0
G9	6,5	Reliance-2(City Palace-2), Reliance-1(City Palace-1)	LT	10.522600	76.225175	**UG**	300	75.24	25	100.24
ABL51704	P6	Post		10.522925	76.22507	**OH**				0
P6	P7	Post		10.523061	76.225125	**OH**		54.48		54.48
P7	P21, 24	AB- Fort Street, Fort Street	LT	10.523125	76.225360	**OH**		18.69		18.69
P21	7	Fort City	LT	10.523202	76.225611	**OH**		28.76		28.76
P7	P17	AB-Bharathakshemam		10.523251	76.224112	**OH**		122.07		122.07
P17	8	Bharathakshemam	LT	10.523825	76.223926	**UG**	300	66.68	5	71.68
P17	P8	Post		10.523121	76.222649	**OH**		161.71		161.71
P8	P18	AB-Emmatty Tower		10.522751	76.222719	**OH**		40.14		40.14
P18	9	Emmatty Tower	LT	10.522778	76.222897	**UG**	400	21.45	5	26.45
P18	P19	AB-Candela		10.522713	76.222713	**OH**		5.83		5.83
P19	RMU3	RMU31706		10.522709	76.222770	**UG**	185			0
RMU3	16	Candela Apartment	LT	10.522545	76.222937	**UG**	185	31.47	6	37.47
P8	P20	AB St-Thomas		10.523305	76.220894	**OH**		199.2		199.2
P20	25	St-Thomas College	HT	10.523294	76.220941	**UG**	300	11.02	5	16.02
AB St-Thomas	26/ABI 51604	Iyyunni	LT	10.523312	76.220588	**OH**		27.82		27.82

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (sq mm)	Mapping distance (m)	Loose distance (m)	Total distance (m)
P5	P22	AB-Seemas		10.522861	76.226168	**OH**		49.98		49.98
P22	2	Seemas	HT	10.523156	76.22624	**UG**	300	33.57	20	53.57
P22	P10	Post		10.522819	76.226316	**OH**		16.98		16.98
P10	23	Kings Way Project	LT	10.523318	76.226419	**UG**	300	60.18	30	90.18
P10	AB5	ABL 51708		10.522765	76.226348	**OH**		6.27		6.27
ABL 51708	3	Honest Bakery	LT	10.522603	76.226276	**OH**		19.58		19.58
ABL 51708	RMU4, 20	RMU31703, Angelic Tower	LT	10.522515	76.226922	**UG**	300	70.72	10	80.72
ABL 51708	G10	Ground		10.522163	76.227959	**UG**				0
G10	RMU5, 19	RMU 31704, Lorde Pally	HT	10.522281	76.227955	**UG**	300	200.15		200.15
RMU5	G10	Ground		10.522163	76.227959	**UG**				0
G10	RMU6	RMU31705		10.52219	76.227216	**UG**				0
RMU6	18	East Fort Tower	LT	10.522085	76.227209	**UG**	300	111.34		111.34
P5	AB9	ABL51703		10.524137	76.225960	**OH**		170.23		170.23
ABL51703	RMU8	RMU31701		10.52449	76.225809	**UG**	300	51.38		51.38
RMU8	30/31	E Forts Unlimited (HT), E Forts (LT)	HT, LT	10.524479	76.225461	**UG**	150	42.91	30	72.91
RMU8	RMU9	RMU31702		10.524017	76.225757	**UG**	300			
RMU9	21	Rappai & Sons	LT	10.524231	76.225612	**UG**	300	94.61	210	304.61
P16	RMU -CT	RMU		10.522380	76.225120	**UG**	XLPE	300		
RMU -CT	36	Chittilapilly Tower	LT	10.522380	76.225120	**UG**	XLPE	300	53	37
RMU6	G14	Ground		10.522379	76.227208	**UG**		300		
G14	G15	Ground		10.521790	76.229213	**UG**		300		
G15	RMU(Zudio)	RMU		10.521892	76.229247	**UG**		300	244	10
RMU(Zudio)	35	Zudio(Richmond properties)	LT	10.522114	76.229260	**UG**		185	25	5

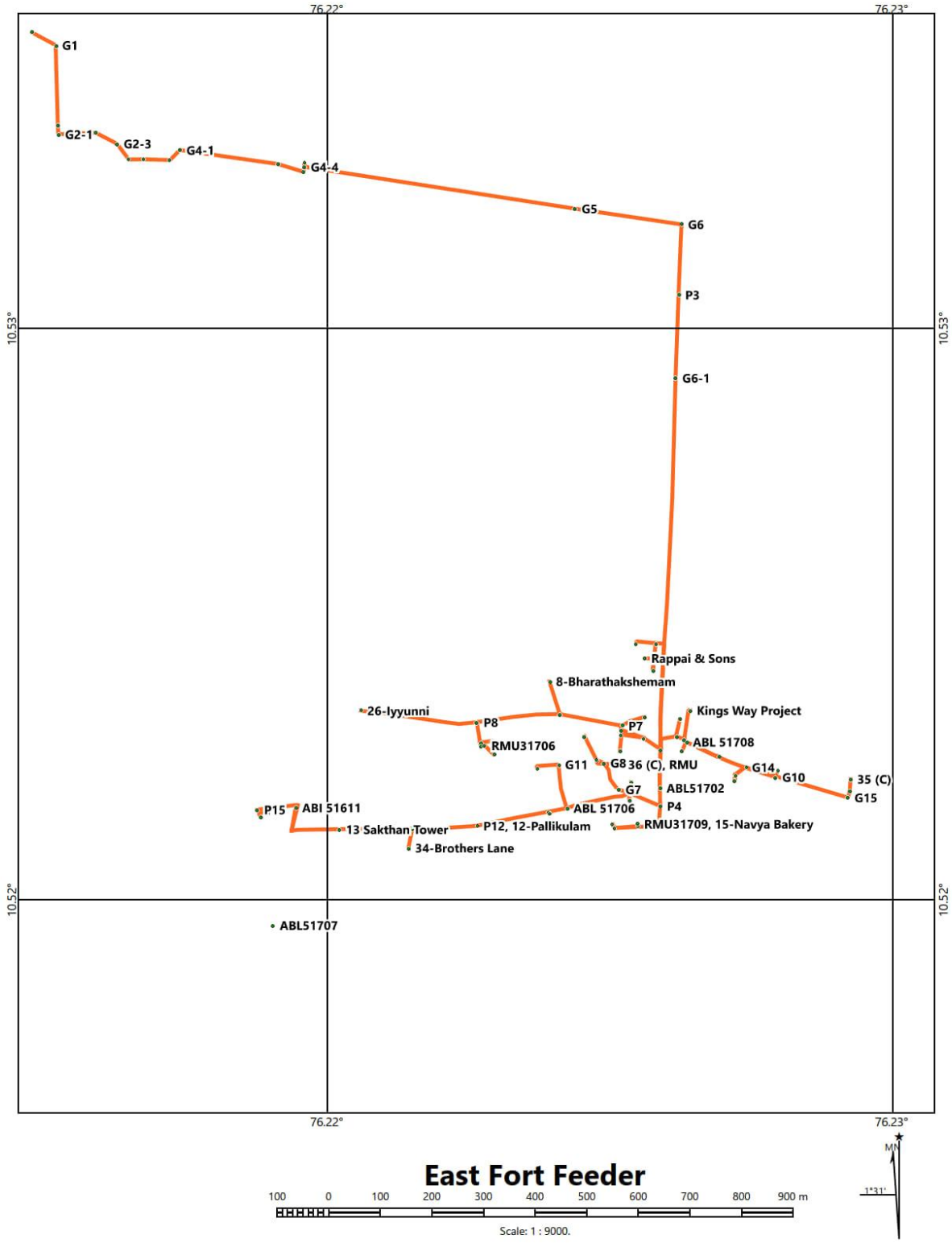

Figure 18: East fort feeder

18. VANCHIKULAM FEEDER

The following table shows the 11-kV line distance in the Vanchikulam feeder

Table 32: HT line distance –Vanchikulam feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No: of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
	S-S	Substation feeder		10.535141	76.214580							
S-S	2P	Post		10.535240	76.214450	**UG**	XLPE	300	1		21	21
2P	G1	Ground		10.535338	76.214386	**UG**	XLPE	300	1			0
G1	ABL51801	ABL		10.535333	76.208329	**UG**	XLPE	300	1	693.81	7	700.81
ABL51801	P1	Post		10.535269	76.205362	**OH**	ABC				35	35
P1	P2	Post		10.531027	76.204970	**OH**	ABC				7	7
P2	P3	Post		10.530969	76.203991	**OH**	ABC				7	7
P3	P4	Post		10.528711	76.205460	**OH**	ABC					0
P4	P5	Post		10.527897	76.205469	**OH**	ABC					0
P5	P6	Post		10.526910	76.205759	**OH**	ABC					0
P6	ABL	ABL51802, ABL51805, ABI51804, ABI51803		10.526442	76.204098	**OH**	ABC			1593.17		1593.17
ABL51802	P7	Post		10.525726	76.202361	**OH**	Racoon					0
P7	P8	Post		10.525438	76.202443	**OH**	Racoon			239.06		239.06
P8	1	-Raya Complex	LT	10.525474	76.202501	**OH**	Racoon			7.49		7.49
P8	P9	Post		10.524369	76.202870	**OH**	Racoon					0
P9	2-Shankaraiyar Road	Transformer	LT	10.524188	76.202998	**OH**	Racoon				151.58	151.58

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No: of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
2	ABL51806	ABL		10.522871	76.203785	**OH**	Racoon			169.24		169.24
ABL51806	3, 4-Modern	Transformer	LT, HT	10.522873	76.203578	**UG**	XLPE	300	1	22.66	7	29.66
ABL51806	ABL	ABL		10.522549	76.203789	**OH**	Racoon			35.62		35.62
ABL	RMU31802	RMU		10.522452	76.203724	**UG**	XLPE	300	1			0
RMU31802	11-WestPlaza	Transformer	HT	10.522330	76.203834	**UG**	XLPE	300	1	30.96	30	60.96
ABL	P10	Post		10.522545	76.203552	**OH**	Racoon			25.95		25.95
P10	8, 7-Grand mall	Transformer	LT,HT	10.522147	76.203596	**UG**	XLPE	300	1	44.29		44.29
P10	ABL51807	ABL		10.522497	76.203414	**OH**	Racoon			16.01		16.01
ABL51807	G2	Ground		10.522465	76.203329	**UG**	XLPE	300	1			0
G2	AB Maruthi	Transformer		10.521939	76.203324	**UG**	XLPE	300	1	71.63	7	78.63
AB Maruthi	9-Bhuvari Tower	Transformer	HT	10.522290	76.203373	**UG**	XLPE	300	1	39.7		39.7
ABL	G2	Ground		10.522465	76.203329	**UG**	XLPE	300	1			0
G2	AB Maruthi, 10	Maruthi Apartment	LT	10.521939	76.203324	**UG**	XLPE	300	1	71.63		71.63
ABL51807	G3	Ground		10.522356	76.202578	**UG**	XLPE	300	1			0
G3	RMU31801	RMU		10.522315	76.202581	**UG**	XLPE	300	1			0
RMU31801	6-K K Tower	Transformer	HT	10.522103	76.202473	**UG**	XLPE	300	1	123.64	20	143.64
ABL	P11	Post		10.522476	76.203000	**OH**	Racoon					0
P11	AB Salfloa	AB		10.522604	76.202982	**OH**	Racoon			59.67		59.67
AB Salfloa	5-Salfloa	Transformer	HT	10.522735	76.202979	**UG**	XLPE	240	1	14.49	7	21.49
ABL	P12	Post		10.522446	76.204041	**OH**	Racoon					0
P12	P13	Post		10.522052	76.204270	**OH**	Racoon			80.12		80.12

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No: of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P13	14-Fimat	Transformer	LT	10.522134	76.204357	**OH**	Racoon			13.15		13.15
14	RMU31803	RMU		10.522177	76.204343	**UG**	XLPE	300	1		7	7
RMU31803	12, 13 Sunny Diamonds	Transformer	LT,HT	10.522283	76.204424	**UG**	XLPE	300	1	19.7		19.7
P13	P13-1	ABL		10.520997	76.204906	**OH**	Racoon			135.88		135.88
P13-1	15-Hawa	Transformer	LT	10.520798	76.204829	**OH**	Racoon			23.57		23.57
15	ABL51809	ABL		10.520762	76.204816	**OH**	Racoon					0
ABL51809	AB Fathima, RMU31804	RMU		10.520552	76.204744	**OH**	Racoon			28.76		28.76
RMU31804	16-Fathima	Transformer	HT	10.520512	76.204599	**UG**	XLPE	300	1	16.48	30	46.48
AB Fathima	AB	AB		10.519734	76.204899	**OH**	Racoon			92.79		92.79
AB	G3-1	Ground		10.519725	76.203984	**UG**	XLPE	300	1			0
G3-1	AB Bhavani	AB		10.519334	76.204054	**UG**	XLPE	300	1	144.08	7	151.08
AB Bhavani	17-Bhavani	Transformer	LT	10.519385	76.204207	**UG**	XLPE	150	1	17.67	15	32.67
AB	P14	Post		10.519521	76.204974	**OH**	Racoon			24.95		24.95
P14	AB Sud	AB Sudharsan		10.519561	76.205042	**OH**	Racoon			8.66		8.66
AB sud	18-Sudharsan	Transformer	LT	10.519421	76.205210	**UG**	XLPE	150	1	24.04	10	34.04
P14	P15	Post		10.519135	76.205074	**OH**	Racoon			44.08		44.08
P15	AB Commercial	AB		10.519124	76.205162	**OH**	Racoon			9.71		9.71

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No: of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
AB Com	19-Commercial	Transformer	HT	10.519285	76.205441	**UG**	XLPE	240	1	35.35		35.35
P15	P15-1	Post		10.518561	76.205318	**UG**	XLPE	300		64.89		64.89
P15-1	RMU TBPL	RMU		10.518533	76.20532	**UG**	XLPE	300				0
RMU TBPL	TBPL RIO	Transformer	LT	10.518664	76.205022	**UG**	XLPE	300		42.69	11	53.69
P15	P16	Post		10.518308	76.205355	**OH**	Racoon					0
P16	20-Kaveri Apartment	Transformer	LT	10.518277	76.204844	**OH**	Racoon			152.64		152.64
P13-1	AB Level10	AB		10.520339	76.205264	**OH**	Racoon			82.66		82.66
AB Level10	RMU31805	RMU		10.520305	76.205232	**UG**	XLPE	240	1			0
RMU31805	22-Level10	Transformer	HT	10.520343	76.205077	**UG**	XLPE	240	1	22.62	10	32.62
AB Level10	ABL51810	ABL		10.519831	76.205564	**OH**	Racoon			65.08		65.08
ABL51810	AB Art	AB		10.519933	76.205627	**OH**	Racoon			13.22		13.22
AB Art	21-Art of living	Transformer	LT	10.520020	76.205730	**UG**	XLPE	240	1	14.98	30	44.98
ABL51810	23-	Refrigeration	LT	10.519344	76.205920	**OH**	Racoon			67.64		67.64
23	P17	Post		10.519135	76.206029	**OH**	Racoon			26.02		26.02
P17	24-Sainic Gas	Transformer	LT	10.519319	76.206364	**OH**	ABC			41.94	15	56.94
P17	P18	Post		10.518286	76.206461	**OH**	Racoon			108.92		108.92
P18	AB LIC	AB		10.518274	76.206422	**UG**	XLPE	300	1	4.47		4.47
AB LIC	25-LIC	Transformer	LT	10.518275	76.206237	**UG**	XLPE	240	1	20.25	30	50.25
P18	RMU31806, 26-	RMU, South Plaza	LT	10.518208	76.206365	**UG**	XLPE	300	1	13.6		13.6

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No: of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P18	ABL51811	ABL		10.517656	76.206858	**OH**	Racoon					0
ABL51811	AB Sitaram, P19	Post		10.516947	76.207224	**OH**	Racoon			172.73		172.73
AB Sitaram	G4	Ground		10.517037	76.207175	**UG**	XLPE	185	1		10	10
G4	G5	Ground		10.515960	76.205012	**UG**	XLPE	185	1			0
G5	27-Sitharam Heritage	Transformer	LT	10.515834	76.205024	**UG**	XLPE	185	1	290.35	10	300.35
P19	RMU31807, 28-KMJ	Transformer	LT	10.516881	76.207142	**UG**	XLPE	300	1	11.57	15	26.57
P19	P20	Post		10.516740	76.207317	**OH**	Racoon			25.06		25.06
P20	AB Merlin	AB		10.516799	76.207389	**OH**	Racoon			10.23		10.23
AB Merlin	29-Merlin Hotel	Transformer	HT	10.517279	76.207969	**UG**	XLPE	150	1	82.76	15	97.76
P20	P21	Post		10.516293	76.207464	**OH**	Racoon					0
P21	P22, 31-State Hotel	Transformer	LT	10.515777	76.207415	**OH**	Racoon			109.32		109.32
P22	G6	Ground		10.515717	76.206668	**UG**	XLPE	300	1		7	7
G6	30-Global Plaza/Global Tower	Transformer	LT	10.515624	76.206674	**UG**	XLPE	300	1	94.61	10	104.61
P22	G7	Ground		10.515433	76.207315	**UG**	XLPE	300	1		7	7
G7	32-Love shore	Transformer	HT	10.515640	76.206920	**UG**	XLPE	300	1	88.52	15	103.52
P22	P23	Post		10.514557	76.207085	**OH**	Racoon			139.7		139.7
P23	RMU30302	RMU		10.514212	76.207012	**UG**	XLPE	300	1	38.99	10	48.99

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm²)	No: of runs	Mapping distance (m)	Loose distance (m)	Total distance (m)
P23	P24	Post		10.514299	76.206926	**OH**	Racoon			33.49		33.49
RMU TBPL	RMU Home			10.518541	76.205385	UG	XLPE	300				
RMU Home	G8			10.518535	76.205589	UG	XLPE	300				
G8	34 (C)	Dist, Homeo Hospital, 160 KVA	HT	10.518647	76.205598	UG	XLPE	300		42	5	47
P9	RMU FORUS WILLIAMS			10.524360	76.203289	UG	XLPE	300				
RMU FORUS WILLIAMS	35 (C)	Forus N Williams TFR 200 KVA	LT	10.524158	76.203406	UG	XLPE	300		72	5	77
New AB	RMU- 31803	RMU		10.528068	76.203395	UG	XLPE	300		200		200
RMU-31803	11836	SALPA NIRVANA APARTMENT	LT	10.527960	76.203129	UG	XLPE	300				50

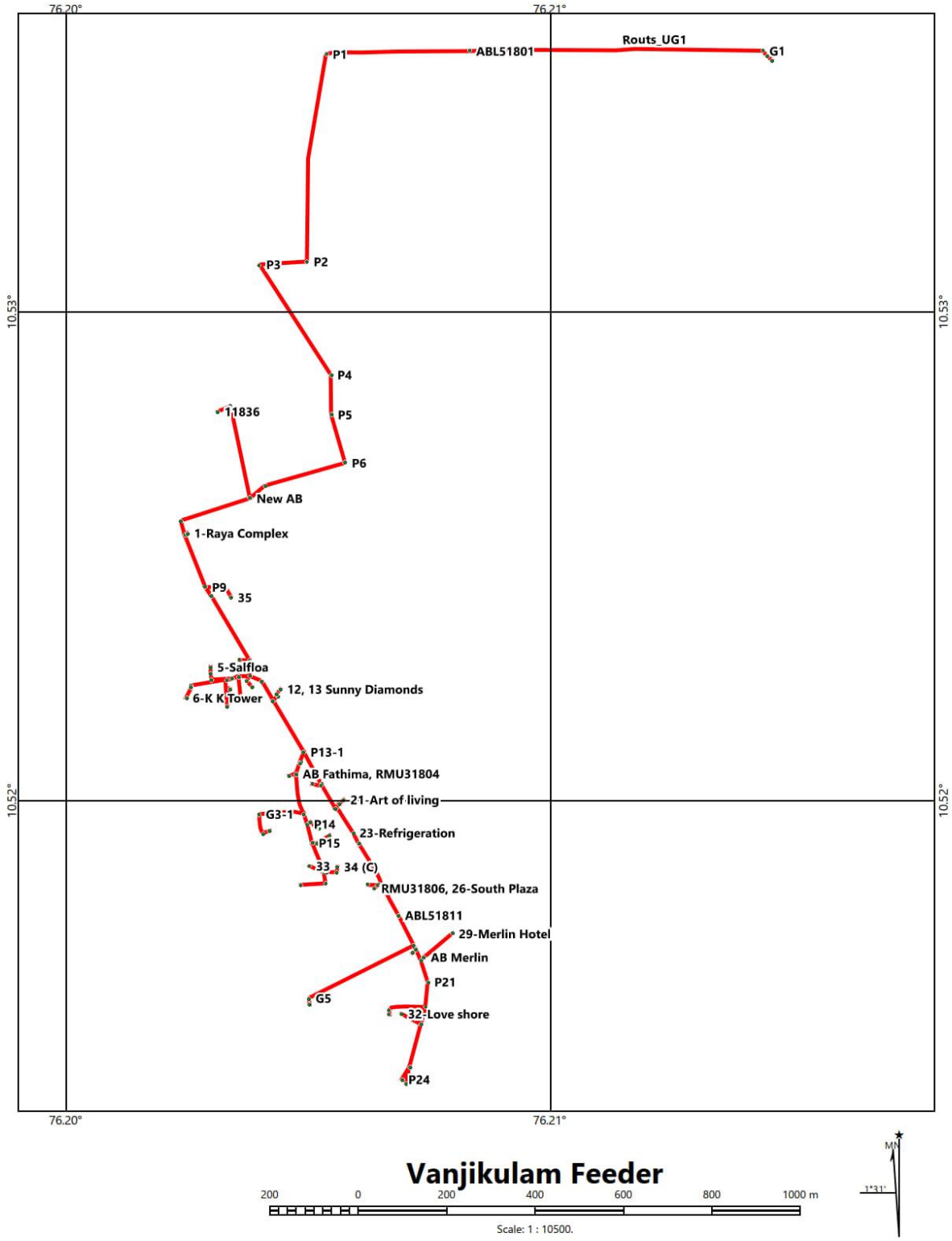

Figure 19: Vanchikulam feeder

5. ENERGY CONSERVATION MEASURES SUMMARY

LIST OF ENERGY CONSERVATION PROPOSED FOR FUTURE

The TCED can consider following possible measures for energy conservation to reduce their distribution loss to their best value as summarised below.

- **Replacing HT & LT overhead lines with UG cables**

  Even though TCED has initiated the replacement of overhead lines with underground cables, there are still areas in the distribution network with overhead lines. Sample analysis has been done for 04 number of feeders which were audited for the viability of replacing overhead lines with UG cables. Resistance per kilometre of the UG cables is less than the overhead lines which is Racoon type for HT and Rabbit type for LT in TCED. The replacement of HT & LT overhead lines with UG cables will result in reduction in energy losses in the distribution network and hence will lead to financial savings. The summary of the proposal in given in the table below.

Particulars	Units	Values
Annual Energy savings	MU	1.537
Annual financial savings	Rs in lakhs	102.267
Estimated investment	Rs in lakhs	176.64
Simple payback period	Months	21

- **Power Factor Improvement in Feeders**

  During the measurement period (5-hour logging), the average power factor recorded at the 110 kV incomer was 0.98 lagging. At the feeder level, three feeders were identified with power factors below 0.98. To improve the power factor to 0.99 lagging in these feeders, the installation of a total of 165 kVAr of reactive power compensation is recommended. This can be achieved by installing HT capacitors at either the 11 kV side or the 33 kV substation, depending on system configuration and feasibility.

  The annual financial savings occur via demand reduction, PF incentives and avoiding penalty. The summary of the savings is given in the table below.

Particulars	Units	Values
Average reduction in monthly demand based on FY 24-25 data[3]	kVA/month	713.7
Annual financial savings	Rs in lakhs	75.70
Estimated investment	Rs in lakhs	80.00
Simple payback period	Months	13

[3] *Since January 2025, TCED has been receiving a combined electricity bill for the 110 kV and 66 kV feeders. The average monthly demand reduction is based on the past three months.*

- **Summary of energy conservation measures**

Table 33: Energy conservation measures - summary

ECM No	Energy Efficiency Measures	Annual Electricity Savings	Annual Financial Savings	Investment	Fixed interest rate	Cash inflow	Net present value	Internal rate of return
		MU	(Rs)	(Rs)	%	Years	(Rs)	%
1	Replacing HT & LT overhead lines with UG cables***	1.538	1,02,26,693	1,75,45,800	8	5	6,91,101	10.86%
2	Power Factor Improvement in Feeders – installation of 165 kVAr total	-	75,69,736	37,50,000	8	1	32,59,015	101.86 %

***At 11 kV = 8.273 km & at 415 V = 20.97 km

- **General observations and suggestions**

Observation	Suggestions
Collection efficiency of the DISCOM is 98.81% which resulted in AT & C loss from 7.68 (FY-2024-25) As per the TCED availed data, the major dues are from the Government departments, urban local bodies, street light and corporation owned buildings.	Collection drives should be placed in the DISCOM area. Awareness shall be provided for the proper billing in due time. Energy cell can give awareness in the DSM and various energy efficiency measures to help them in reducing the consumption.
As the back-feed units from one feeder to another were not available in the DISCOM, exact loss analysis was unable to calculate from the existing data.	Feeder boundary energy meter is suitable option to have the back-feed data and records shall be maintained properly.

LIST OF ENERGY CONSERVATION MEASURES ADOPTED/TAKEN

- **Feeder bifurcation: -** Previously, **Kottapuram feeder** supplied an average unit of 16.94 MU/month. It was subsequently bifurcated into **Kottapuram and Vanjikulam**, leading to the replacement of the overhead (OH) line (Racoon) with an ABC cable for a distance of 1.7 km. This replacement resulted in an annual loss reduction of 0.171 MU. Detailed calculations are provided in the table below.

Table 34: Energy Conservation measures adopted/taken

Particulars	Unit	Value
D&T losses of HT Racoon OH line cable before feeder bifurcation	kWh/annum	2,30,355
D&T losses of HT ABC OH line cable loss after feeder bifurcation	kWh/annum	58,752
Net Annual Unit Savings	**kWh/annum**	**1,71,603**
HT line Distance reconductored with ABC cable	m	1,700
Energy charges	Rs/kWh	6.50
Investment cost	**Rs**	**50,00,000**
Net Annual Financial Savings	**Rs/annum**	**11,15,418**
Simple payback period	**Months**	**54**

NOTE: Resistance of HT Racoon OH line cable = 0.3712 Ω/km
Resistance of HT ABC OH line = 0.25 Ω/km

ENERGY FLOW ANALYSIS

1. ENERGY FLOW

The basic energy flow[4] in the DISCOM is given in the chart below.

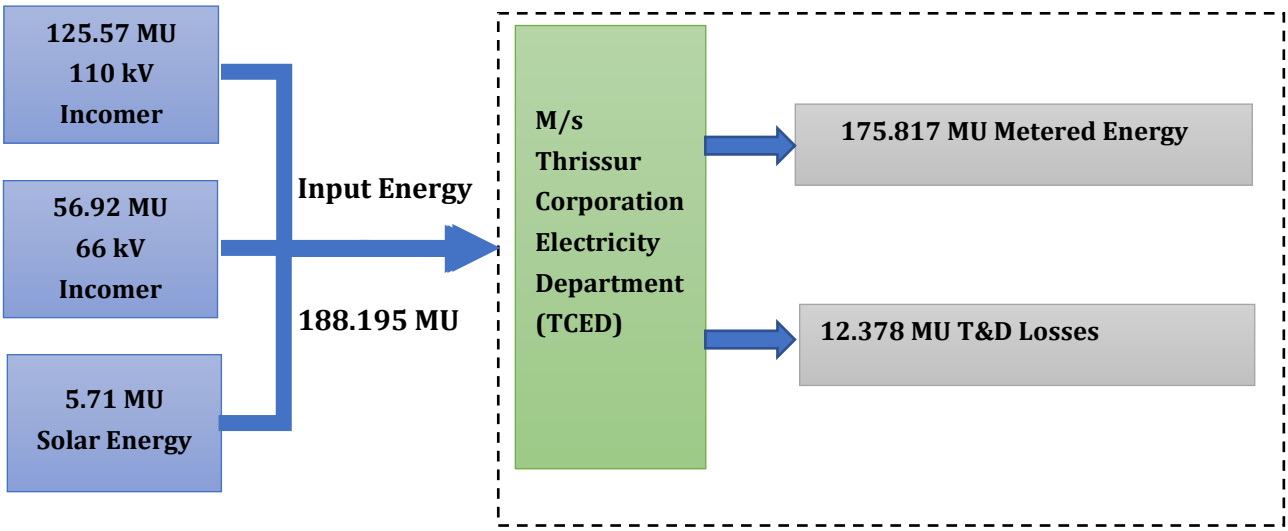

Figure 20: Energy flow diagram - TCED

- *Input energy = the energy received at the TCED for distribution.*
- *Metered energy = energy metered at the consumer end*
- *T&D losses = Net losses*

[4] *The two incomers from the KSEB side—110 kV and 66 kV—have been consolidated into a single 110 kV incomer effective from January 2025.*

2. VALIDATION OF METERED DATA

The validation of data includes the KSEBL metering and feeder meters in the switching station of the TCED. The following tables will provide the validation of the metering by comparing with the calibrated power analyzers.

COMMERCIAL LOSSES

The auditors could not able to ascertain commercial losses/non-technical losses in the DISCOM during the FY 2024-25 due to the following factors.

1. Back feeding of one feeder to another during any failure in service, resulted in mixing up of consumption at the Feeder meter.
2. The record of meter errors was not readily available in section office to ascertain the losses caused in each feeder.
3. There is no theft reported in any sections during the audit period thus if any loss occurs in the commercial it could be due to the meter errors or damage.

Metering deviation was done in feeder incomer in order to derive an energy balance between purchase and sale. The energy meters at feeder incomer were cross checked using calibrated meters like Krykard CA8345/ ALM 31.

DEVIATION OF METERING

- **Deviation of incomer meters**

  The TCED incomer energy meters at the 110-kV substation were verified with power quality analysers and given in the table below.

Table 35: TCED incomer meter – deviation with PQ analyser

Sl no	Meter	KSEBL meter	Power analyser reading	KSEBL meter vs Power analyser
		kWh	kWh	%
1	110kV incomer	81.75	80.13	-2.023

- **Deviation of feeder meters**

Table 36: Deviation of feeder meters

Feeder No:	Feeder name	Panel reading	Average PF	Power analyser reading	Difference in consumption	% Of error
		kWh		kWh	kWh	%
1	Mission Quarters	670	0.99	659	10.64	-1.61
2	Veliyanoor	550	0.99	614	-63.61	10.37
3	Koorkanchery	350	0.99	334	15.74	-4.71
4	Paravattani	490	0.99	461	29.11	-6.31
5	Aranattukkara	1,906	0.98	1,897	9.17	-0.48
6	Jubilee Medical College	362	0.99	360	2.61	-0.72
7	Vivekodayam	1,169	0.98	1,146	23.13	-2.02
8	Bini	355	0.99	347	7.63	-2.20
9	Poonkunnam	365	0.97	345	20.10	-5.83
10	Keralavarma	579	0.99	563	15.86	-2.82
11	Ramanilayam	491	0.98	472	19.58	-4.15
12	M.O Road	800	1.00	767	32.93	-4.29
13	Kottappuram	280	0.92	274	5.99	-2.18
14	Chembukavu	480	0.98	455	24.62	-5.41
15	Shornur Road	660	0.98	641	19.17	-2.99
16	District Hospital	1,270	0.99	1,066	204.07	-19.14
17	East fort	539	0.98	403	136.25	-33.83
18	Vanjikulam	6,264	0.98	6,000	264.49	-4.41

- *Considering the CT class variation among the Feeder meter and power analyzer, the errors observed are minimal except for Veliyanoor, East fort and District Hospital feeders.*
- *However, observed only a variation -2.023% difference between the KSEBL and power analyzer meter in the 110-kV incomer. This could be due to the CT class difference variation with our power analyzer (1s) and the KSEBL meter (0.2s). Considering this, the difference is negligible and the meters are ok.*
- *Also, a mismatch observed in the energy meter readings for KSEBL and TCED feeder-wise meters. However, when we checked the TOD meter by bypassing the Potential Transformer (PT) and Current Transformer (CT), the values matched.*
- *Verify the CTs with periodic calibration and replace them if necessary.*

3. VALIDATION OF ENERGY FLOW DATA

The section provides the details of energy purchased and sold in the DISCOM

INCOMER – AT SWITCHING STATION

TCED procures electricity from KSEB Ltd for supply to its consumers and for its own consumption. Until December 2024, TCED received power at 110 kV and 66 kV from KSEB Ltd under **Part-C: BULK SUPPLY – EHT TARIFF APPLICABLE TO SMALL LICENSEES**. The rates specified in this schedule (Part C) are exclusive of electricity duty, surcharge, cess, taxes, minimum fees, and other statutory levies; therefore, only the demand and energy charges are applicable for the electricity cost.

Since January 2025, TCED has been receiving a combined bill for power availed at 110 kV and 66 kV, categorized entirely under 110 kV, under the same tariff category – *Part-C: BULK SUPPLY – EHT TARIFF*

- **BASELINE DATA**[5]

The basic details of the bill and TCED distribution are as follows:

Base Line Data – FY 2024-25		
1	Electricity provider	KSEBL
2	Supply Voltage	110 kV
3	Tariff	Licensee: Thrissur Corporation– EHT TARIFF
4	Consumer number	LCN:21/1029&21/T
5	Section office	110 KV Sub Station, Viyyur
6	Contract demand (kVA)	45000.0
7	Maximum demand registered (kVA)	38,008
8	Average monthly electricity consumption (MU)	15.21
9	Annual unit consumption (MU)	182.49
10	Average power factor	0.97
11	Tariff Rate of energy charges (Rs / kWh)	6.65
12	Demand charge (Rs / kVA)	400
	Other details	
13	Number of incoming feeders – From KSEBL - 110 kV and 66 kV (Nos)	02
14	Number of substations and voltage level	110 kV – Aswini – 01 no 66 kV Aswini – 01 no 33 kV Ikkanda warrier – 01 no
15	Number of TCED Distribution Feeders – 11 kV (Nos)	18
16	Feedback points – To KSEBL (Nos)	NIL
17	Number of transformers under TCED	495
18	Number of DT at 415V level	495
19	Number of s/s transformers at 33 kV level	01
20	Number of s/s transformers at 11 kV level	07
21	Line length at 33 kV voltage level (km)	4.2
22	Line length at 11 kV voltage level (km)	121.013
23	Line length at LT voltage level (km)	287.953
25	HT/LT ratio	1/2.30

[5]*The baseline data is primarily based on the combined electricity bills issued from January 2025 onwards. However, unit consumption and power factor have been considered based on the billing data from both 110 kV and 66 kV supply points till January 2025.*

26	Number of consumers - as of March 2025	42995
27	Connected load (MW) - as of March 2025	259.49
28	Number of HT consumers	138
30	Number of LT consumers	42817

- **DEMAND ANALYSIS**

DEMAND TARIFF STRUCTURE

As per the Kerala State Electricity regulatory comission (KSERC) tariff order dated 16/03/2020, Billing Demand (BD) shall be the Recorded Maximum Demand (RMD) for the month in kVA or 75% of Contract Demand (CD) whichever is higher in 30 minutes interval period.

The demand calculation for TCED, as per the KSERC order, is given below. Since January 2025, TCED has been receiving a combined bill for 110 kV and 66 kV supply, and this method is being followed in TCED's billing system with a contract demand of 45 MVA.

Recorded maximum demand (RMD)	•Maximum Demand registered in Normal, Peak, and Off-peak periods
Billing demand - BD	•BD = RMD or •75% of contract demand
Billing demand charge	•Demand charges = BD x 400 Rs/kVA

DEMAND REGISTERED - FY 2024-25

The registered or billed demand thus applied to the TCED and the consumption during the FY 2024-25 is given in the figure below.

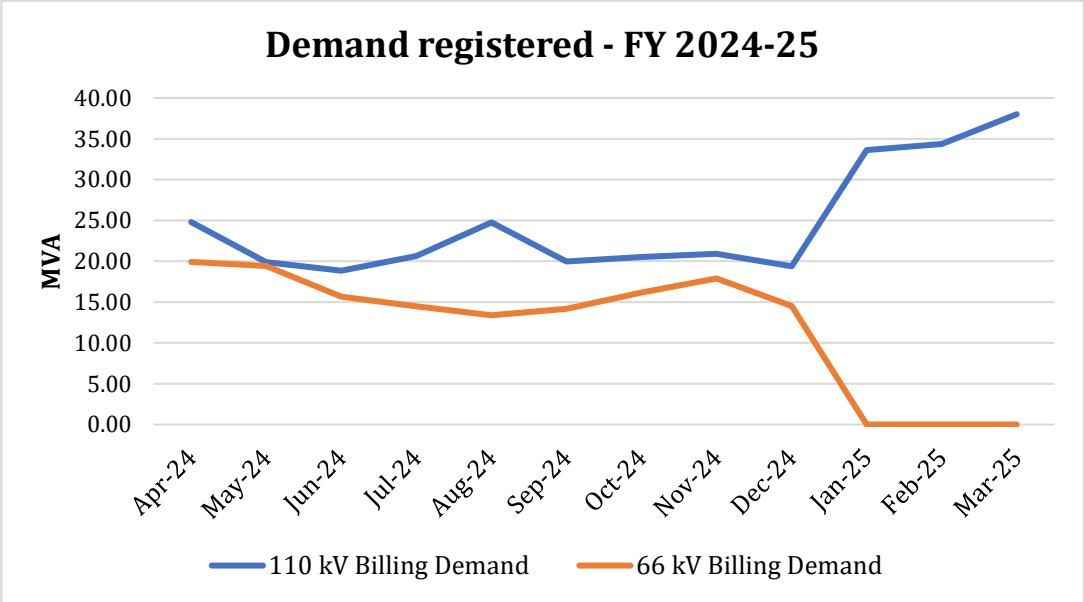

Figure 21: Demand variation – FY 2024-25

- **ENERGY CONSUMPTION ANALYSIS**

Energy Calculation Method

As per the Kerala State Electricity regulatory comission (KSERC) tariff order dated 16/03/2020, TOD tariff is applicable to Bulk consumer - Small licensees. The calculation method for the energy charges is mentioned below.

The calculation method for the energy charges is mentioned below.

Energy consumption	•Unit consumption in Normal Period (A) •Unit consumption in Peak Period (B) •Unit consumption in Off-Peak Period (C)
Chargeable energy	•D = A + B +C
Energy charges	•Energy charges = D x 6.65 Rs/kWh

Unit Consumed – FY 2024-25

This section analyses the trend for the unit consumption by the TCED over the period FY 2024-25. A total of 182.49 MU consumed by TCED during FY 2024-25.

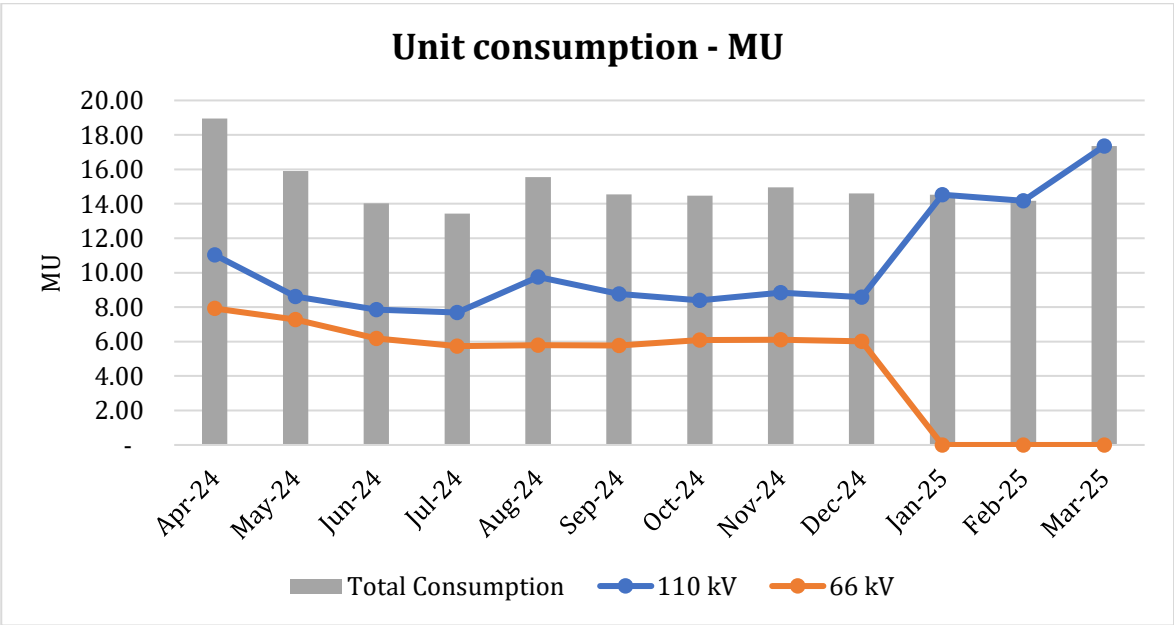

Figure 22: Energy consumption analysis

- **POWER FACTOR ANALYSIS**

Power factor calculation method

As per the Kerala State Electricity regulatory comission (KSERC) tariff order no: 0476/DD(T)/2020/KSERC dated 24/03/2022, power factor incentive/disincentives were applicable to Bulk consumer - Small licensees. The calculation method for the Power factor is mentioned below.

Active Energy consumption	•Denoted as (A)
Apparent Energy consumption	•Denoted as (B)
Power factor	•PF = A ÷ B
Power factor incentive	•For every increase of 0.01 from the 0.95 lagging, 0.5% of the energy charge will be provided as incentive.
PF disincentive	•For every decrease of 0.01 in the range of 0.95 to 0.90, 0.5% of the energy charge. •Less than 0.90 1% of energy charge.

During the audit period, as per the revised tariff, TCED is entitled to receive a Power Factor (PF) incentive for maintaining a PF above 0.95 (lagging). Since January 2025, TCED has been receiving a combined bill for 110 kV and 66 kV supply, in which the recorded PF was 0.97 (lagging). Accordingly, TCED has been receiving PF incentives for maintaining the PF above 0.95 and up to unity, amounting to approximately ₹31 lakhs over a span of three months.

Power factor registered in FY 2024-25

This section analyses the trend for the Power factor over the period FY 2024-25

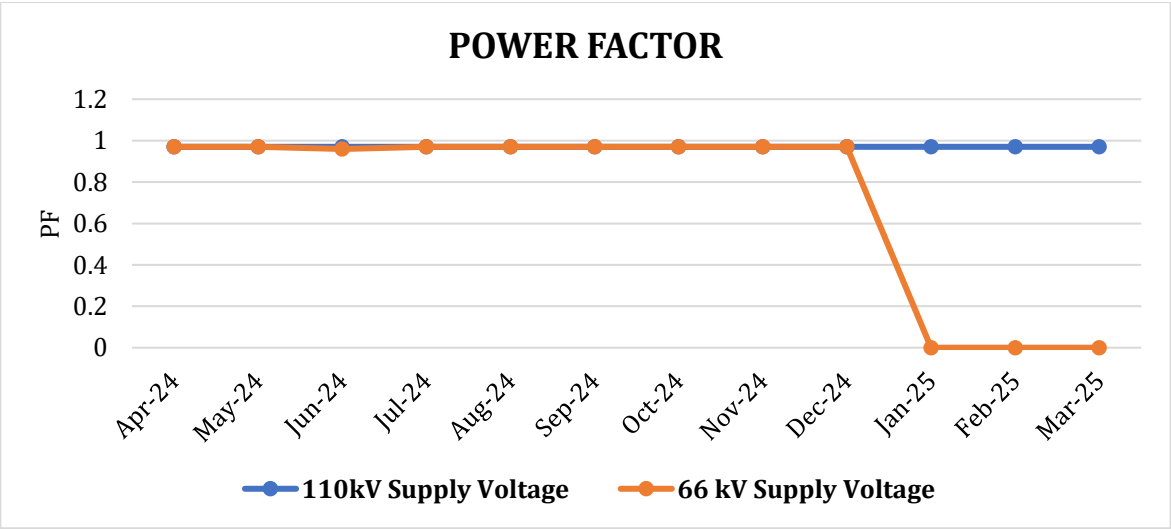

Figure 23: Power factor

- **OBSERVATIONS AND RECOMMENDATION – ENERGY CONSUMPTION PROFILE**

Table 37: Observations & Recommendation – Energy Consumption Profile

Observation	Recommendation	Benefit
Demand charges reduction by Power factor improvement		
• Since January 2025, TCED has been receiving a combined bill for 110 kV and 66 kV supply, in which the recorded PF was 0.97 (lagging). • Demand charges will reduce by ensuring the PF at near unity. • The detailed calculation for the PF improvement is mentioned below in conclusion and action plans section. • An incentive of Rs 31 lakhs received in the FY 2024-25 for maintaining good PF in the DISCOM.	• Install HT capacitors either at the 11-kV side or at the 33-kV substation to maintain the PF in the section. • Estimated that a total of 165 kVAr will be sufficient to maintain the PF at 0.99 lag. • Awareness campaign shall be given to major consumers to install capacitors especially for the commercial buildings and apartment flats which will significantly reduce the losses in the respective feeders along with the improvement in PF. • Detailed analysis shall do for the installation of capacitors in the feeder level.	• The net annual savings by the PF improvement is 75.70 lakhs • In addition, the distribution line losses and transformer losses will get reduced.

FEEDER WISE SALES DATA

The following table presents the units sold by the DISCOM during the fiscal year 2024-25, depicting the energy consumption of consumers categorized by feeder.

NOTE ***Sampled Transmission and Distribution (T&D) loss calculation and analysis were conducted for all 18 feeders. It was observed that certain discrepancies in consumer consumption data during the audit period***

Table 38: Feeder wise sales data FY 2024-25

Sl no	Feeder Name	No: of Consumers	Energy sold by DISCOM	
		Nos	kWh/year	kWh/month
1	Mission Quaters	2,041	1,05,54,628	8,79,552
2	Veleyannor	2,094	85,50,734	7,12,561
3	Koorkenchery	3,007	96,80,803	8,06,734
4	Paravattany	3,327	95,66,992	7,97,249
5	Aranattukara	3,929	1,27,30,120	10,60,843
6	JMC	1	88,03,320	7,33,610
7	Vivekodhayam	1,862	75,25,125	6,27,094
8	Bini	993	68,13,721	5,67,810
9	Poonkunam	2,441	88,18,819	7,34,902
10	Keralavarma	3,394	1,04,72,113	8,72,676
11	Ramanilayam	680	80,99,035	6,74,920
12	M O Road	2,630	1,18,92,347	9,91,029
13	Kottapuram	2,776	66,70,004	5,55,834
14	Chembukkavu	2,695	1,06,34,994	8,86,250
15	Shornur Road	2,962	1,13,06,724	9,42,227
16	DH	3,105	1,21,36,776	10,11,398
17	East Fort	2,124	1,16,20,852	9,68,404
18	Vanjikulam	2,199	85,54,967	7,12,914

LOSS & SUBSIDY COMPUTATION

1. ENERGY ACCOUNTS ANALYSIS FOR PREVIOUS YEARS- FY 2023-24

The performance summary of TCED as DISCOM as per the FY 2023-24 is given in the following table.

Table 39: Summary of DISCOM – FY 2023-24

Performance Summary of Electricity Distribution Companies			
1	Period of Information Year of (FY) information including Date and Month (Start & End)	1st Apr, 2023 - 31st March, 2024	
2	**Technical Details**		
(a)	**Energy Input Details**		
(i)	Input Energy Purchase (From Generation Source)	Million kWh	182.078
(ii)	Net input energy (at DISCOM Periphery including sale outside periphery)	Million kWh	182.078
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded)	Million kWh	169.87
(b)	Transmission and Distribution (T&D) loss	Million kWh	12.209
		%	6.71
	Collection Efficiency	%	99.22%
	Billing Efficiency	%	93.31%
(c)	Aggregate Technical & Commercial Loss	%	7.43%

As the collection efficiency is 99.22% the AT&C loss of TCED registered was 7.43% during the FY 2023-24.

Table 40: AT & C loss – FY 2023-24

Name of circle	Period From 1st April 2023 to 31st March 2024									
	Consumer profile	Energy parameters			Losses		Commercial Parameter			AT & C loss (%)
	Consumer category	Input energy (MU)	Metered energy	% Of energy consumption	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	
TCED	Residential	182.078	46.60	27.43 %	12.209	6.71	32.61	32.53	99.77%	7.43
	Agricultural		0.06	0.03%			0.03	0.03	93.42%	
	Commercial/ Industrial-LT		71.51	42.10 %			80.13	79.24	98.90%	
	Commercial /Industrial-HT		50.53	29.75 %			54.04	53.70	99.37%	
	Others + Feedback		1.17	0.69%			0.59	0.59	100.00 %	
Total		**182.078**	**169.869**	**100%**	**12.209**	**6.71%**	**167.40**	**166.10**	**99.22%**	**7.43 %**

2. ENERGY ACCOUNTS ANALYSIS FOR PRESENT YEAR- FY 2024-25

CATEGORY OF DIVISION WISE LOSSES – FY 2024-25

The consumer details, energy parameter and the overall circle wise T&D Losses are mentioned in the table below:

Table 41: Division wise losses

Division Wise Losses												
Name of circle	Period From 1st April 2024 to 31st March 2025											
	Consumer profile					Energy parameters					Losses	
							Billed energy (MU)					
	Consumer category	No of connection metered (Nos)	No of connection Un-metered (Nos)	Total Number of connections (Nos)	% of number of connections	Input energy (MU)	Metered energy	Unmetered/ assessment energy	Total energy	% of energy consumption	T&D loss (MU)	T&D loss (%)
TCED	Residential	23211	0	23211	54%	188.189	47.61	0	47.61	27.08%	12.373	6.57
	Agricultural	178	0	178	0.41%		0.05	0	0.05	0.03%		
	Commercial/ Industrial-LT	19064	0	19064	44%		75.92	0	75.92	43.18%		
	Commercial /Industrial-HT	138	0	138	0.32%		50.96	0	50.96	28.99%		
	Others + Feedback	364	0	364	1%		1.28	0	1.28	0.73%		
Sub-total		**42955**	**0**	**42955**	**100%**	**188.189**	**175.817**	**0**	**175.817**	**100%**	**12.373**	**6.57%**

Methodology for T&D loss computation:

- $T\&D\ Losses\ (MU) of\ a\ circle = Sum\ of\ Input\ Energy\ of\ the\ circle\ (MU) - Sum\ of\ Metered\ energy\ of\ all\ categories\ within\ the\ circle\ (MU) - Feedabck\ Energy\ (MU)$
- $T\&D\ Losses\ in\ \% = \frac{T\&D\ Losses\ (MU)}{Input\ Energy\ to\ the\ circle\ (MU)} * 100$
- $T\&D\ Losses\ (MU) of\ a\ DISCOM = \frac{Sum\ of\ circlewise\ T\&D\ Losses\ \ (MU)}{Cummulative\ Sum\ of\ \ Input\ Energy\ (MU)\ to\ all\ circle} * 100$

AGGREGATE TECHNICAL & COMMERCIAL (AT&C) LOSS

Aggregate Technical & Commercial Loss (AT&C Loss) is defined as the summation of all technical as well as commercial power loss that occurs due to electrical power flow through sub-transmission and distribution network.

Technical Loss is defined as the summation of power loss through 33 kV, 11 kV line and LT line loss including transformer loss and others.

Commercial Loss is defined as the summation of power loss occurring due to theft/ pilferage, deficient meter, inefficiency in billing & unrealized revenue due to collection inefficiency.

Computation of AT& C Loss:

Aggregate Technical & Commercial Loss (AT&C) is computed from the actual meter readings of the meter installed at various locations in the system.

- **Overall Billing Efficiency (%)** = Total Sale in MU/ Total input in MU
- **Overall Collection Efficiency (%)** = Total Collection Received (Rs. in Crs.) / Total Billing to Consumers (Rs. in Crs.)

- **AT & C Loss (%)** = 1- {Billing Efficiency % x Collection efficiency %}

As the collection efficiency is 98.81% the AT&C loss of TCED registered was 7.68% during the FY 2024-25.

Table 42: AT & C loss – FY 2024-25

S.No	Name of circle	Period From 1st April 2024 to 31st March 2025									
		Consumer profile	Energy parameters			Losses		Commercial Parameter			AT & C loss (%)
		Consumer category	Input energy (MU)	Metered energy	% Of energy consumption	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	
1	TCED	Residential	188.189	47.61	27.08%	12.373	6.57%	34.62	34.50	99.65%	7.68
		Agricultural		0.05	0.03%			0.03	0.03	86.67%	
		Commercial/ Industrial-LT		75.92	43.18%			67.08	66.33	98.88%	
		Commercial/ Industrial-HT		50.96	28.99%			32.53	32.48	99.85%	
		Others		1.28	0.73%			42.45	41.28	97.24%	
Sub-total			**188.189**	**175.817**	**100%**	**12.373**	**6.57%**	**176.71**	**174.62**	**98.81%**	**7.68%**

3. TECHNICAL LOSSES

Technical losses are subdivided into Four categories:

1. HT OH line & cable losses
2. Transformer loading & losses
3. LT OH line loss &
4. LT cable losses

The detailed calculation and the loss evaluation for 16 feeders is given in the sections below.

FEEDERWISE LINE LOSS CALCULATION

The details of OH lines used in the TCED distribution system is given in the table below. The HT line length was measured using the GPS mapping.

Table 43: TCED Distribution –line details

Sl.No	Feeder	HT							
		OH Line Length	UG Cable length						
			95 sq.mm	150 sq.mm	185 sq.mm	240 sq.mm	300 sq.mm	400 sq.mm	ABC - 120 sq mm
		m	m	m	m	m	m	m	m
1	Mission Quaters	4507		139	77	31	4809.31	39	
2	Veleyannor	1,493			138	32	3,921		
3	Koorkenchery	3,182		130	232	266	3,358		
4	Paravattany	3,163		272	111		4,908		34
5	Aranattukara	4,079				214	5,714		12
6	JMC						2,811		
7	Vivekodhayam	2,141		40	124	86	2,814		23
8	Bini	1,850		63	122	354	1,259		19
9	Poonkunam	2,239		230	378		3,920		
10	Keralavarma	2,981		157	238	123	5,651		28
11	Ramanilayam	1,811		878	221		891		

Sl.No	Feeder	HT							
		OH Line Length	UG Cable length						
			95 sq.mm	150 sq.mm	185 sq.mm	240 sq.mm	300 sq.mm	400 sq.mm	ABC - 120 sq mm
		m	m	m	m	m	m	m	m
12	M O Road	1,731	170	209	480	266	4,885		26
13	Kottapuram	2,512		63	455		3,175		
14	Chembukkavu	3,435			170	409	2,286		14
15	Shornur Road	2,118		572	301		4,011		
16	DH	2,350		497	67	256	4,659		
17	East Fort	2,119		73	77		4,725	56	
18	Vanjikulam	2,173		164	310	185	1,973		1,728
Total		**43884**	**170**	**3486**	**3503**	**2221**	**65769**	**95**	**1884**

FEEDER WISE LINE LOSS

Feeder wise line loss calculation is given in the tables below. The calculations are based on month wise unit consumption and converted to yearly in the summary section.

The detailed calculation and the loss evaluation for 18 feeders is given in the sections below.

3.1 MISSION QUARTERS FEEDER

Table 44: Loss analysis – Mission Quarters

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
	SS	Substation Feeder			**UG**											
SS	P1	Post			**UG**	19										
G6	25	Millenium Kuries	Client	LT	**UG**	189										
					UG	208	15,873	0.10			15,559	2.9	15,562	160	0.52	311
					OH	3	15,873	0.00								
RMU2	27	Alice Legacy	Client	LT	**UG**	60										
					UG	641	9,037	0.10			8,373	1.8	8,375	400	1.10	663
					OH	-	9,037	-								
RMU2	11	Sky Tower	Client	LT	**UG**	200										
					UG	789	11,974	0.22			11,674	5.0	11,679	160	0.49	296
					OH	-	11,974	-								
AB5	1	Navani Heights(C)	Client	LT	**UG**	25										
					UG	938	9,175	0.16			8,617	13.4	8,630	315	0.91	544
					OH	119	9,175	0.06								
AB6	21 (c)	Navani Garden	Client	LT	**UG**	31										
					UG	31	7,743	0.00			7,195	4.8	7,200	315	0.91	543
					UG	913	7,743	0.11								
					OH	158	7,743	0.05								
AB7	RMU4,31	RMU 30104, Jos Alukkas HT 160kVA	Client	HT	**UG**	39										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	39	12,634	0.00								
					UG	913	12,634	0.13								
					OH	29	12,634	0.01								
AB8	3	Muttichuokaran (C/D) 250	C/D	LT	**OH**	70										
					UG	913	46,049	3.84	35,681	9,569	45,250	6.1	45,485	250	0.94	564
					OH	279	46,049	3.35			45,250	30.3				
											45,250	198.5				
P7	AB9, AB10, 04	ABL50105, AB joy, Kallu Shapp (D) 250	Department	LT	**OH**	142										
					UG	913	89,203	14.42	67,679	20,082	87,761	184.9	88,192	250	1.69	1,011
					OH	350	89,203	15.80			87,761	130.7				
											87,761	115.6				
RMU5	28	RMU30105, Joy Alukkas HT 315kVA	Client	HT	**UG**	37										
					UG	1,036	22,619	0.47								
					OH	350	22,619	0.45								
G15	RMU7,30	RMU30107,Kalyan Hyper Market (c)	Client	LT	**UG**	76										
					UG	989	16,898	0.56			16,475	-	16,475	250	0.71	423
					OH	396	16,898	0.64								
RMU8	32 (C)	Precious Home 315	Client	LT	**UG**	412										
					UG	1,325	12,246	0.39			11,686	12.3	11,698	315	0.91	548
					OH	558	12,246	0.47								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
AB12	08 (D), P9	Post, Cemetery(D)	Department	LT	**OH**	66										
					UG	913	55,139	5.51	41,467	12,923	54,390	114.7	54,505	250	1.06	635
					OH	624	55,139	10.75								
AB13	23 (c)	Pleasant hill	Client	LT	**UG**	43										
					UG	43	4,016	0.00			3,736	2.4	3,738	160	0.46	278
					UG	913	4,016	0.03								
					OH	1,043	4,016	0.10								
P14	09,AB14	AB-Microwave, Microwave (D) 150kVA	Department	LT	**OH**	24										
					UG	913	16,236	0.48	14,563	1,328	15,891	11.3	15,903	100	0.55	333
					OH	1,059	16,236	1.58								
AB14	10(c)	BSNL Microwave (C) HT 160	Client	HT	**OH**	40										
					UG	913	39,716	1.27								
					OH	1,099	39,716	4.37								
AB15	12 (c)	Chemmannam 160	Client	LT	**UG**	100										
					UG	1,013	2,664	0.01			2,387	0.1	2,387	160	0.46	277
					OH	1,066	2,664	0.04								
RMU10	34 (C)	ESAF Jazz Tower (C)	Client	LT	**UG**	52										
					UG	966	15,795	0.48			15,479	5.8	15,485	160	0.52	311
					OH	1,314	15,795	1.86								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
P21	14 (D), AB19	AB SIB,SIB (D), 500	Department	LT	**OH**	4										
					UG	913	79,921	11.58	62,764	16,037	78,801	229.4	79,030	250	1.49	891
					OH	1,378	79,921	49.87								
AB19	15 (C)	SIB2 (c) HT Meter	Client	HT	**UG**	41										
					UG	954	43,545	1.60								
					OH	1,378	43,545	6.58								
AB Vasan	16 (c)	Vasan Eye Care (HT)	Client	HT	**UG**	32										
					UG	945	5,224	0.02								
					OH	1,476	5,224	0.10								
AB Das	17 (c)	Das Continental HT	Client	HT	**UG**	74										
					UG	987	58,661	3.00								
					OH	1,512	58,661	13.10								
P32	13(D)	St. Joseph's (D) 315	Dept	LT	**OH**	9										
					UG	913	46,636	3.94	37,271	8,700	45,970	-	45,970	315	1.11	666
					OH	1,236	46,636	15.23			45,970	-				
P29	20 (c)	Retreat appartment	C/D	LT	**OH**	147										
					UG	945	57,275	6.15	44,032	12,143	56,174	28.4	56,545	315	1.22	730
					OH	2,375	57,275	44.14			56,174	58.3				
											56,174	284.1				
G24	22 (c)	Skyline Infinity (Mundupalam)	Client	LT	**UG**	145										
					UG	1,090	12,234	0.32			11,559	9.6	11,569	400	1.11	665

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	1,443	12,234	1.22								
RMU9	26 (C)	Asset 400	Client	LT	**UG**	23										
					UG	23	21,346	0.03			20,650	17.9	20,668	400	1.13	677
					UG	1,043	21,346	0.94								
					OH	1,455	21,346	3.76								
G27	AB23, 07 (D)	ABL 50108, Avenue road 250	Department	LT	**UG**	309										
					UG	1,043	36,615	2.78	30,301	5,750	36,051	60.0	36,111	250	0.84	504
					OH	1,455	36,615	11.05								
P38	5	Xavy Thekkath 05	Client	LT	**OH**	55										
					UG	913	5,765	0.06			5,497	0.9	5,498	100	0.44	267
					OH	589	5,765	0.11								
AB25	RMU6, 29(c)	RMU30106, Aquatic 160kVA	Client	LT	**UG**	48										
					UG	961	9,273	0.16			8,983	2.4	8,986	160	0.48	288
					OH	739	9,273	0.36								
AB26	19(C)	Federal Residency 500	Client	LT	**UG**	61										
					UG	974	18,262	0.64			17,438	136.9	17,575	500	1.14	686
					OH	837	18,262	1.58								
P43	06 (D), P43-1	Post , Swimming Pool	Department	LT	**OH**	187										
					UG	913	43,073	3.36	34,881	7,620	42,501	21.7	42,576	200	0.83	497
					OH	805	43,073	8.46			42,501	53.4				

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
P50	33 (D), P 50-1	Mulberry Department	Department	LT	**OH**	93										
					UG	913	23,210	0.98	20,214	2,559	22,772	7.5	22,799	100	0.69	412
					OH	1,183	23,210	3.61			22,772	18.7				
AB27	18	Mulberry	Client	LT	**UG**	92										
					UG	92	9,850	0.04			9,537	3.8	9,540	200	0.52	310
					UG	913	9,850	0.18								
					OH	1,236	9,850	0.68								
G32	24 (D), P52-1	SN Temple 250	Department	LT	**UG**	290										
					UG	1,203	63,653	9.67	50,125	12,589	62,714	36.3	62,941	250	1.19	712
					OH	1,230	63,653	28.25			62,714	190.7				
		NET SUM						**301.39**		**1,09,300**		**2,000.6**				**15,727**

3.2 VELIYANOOR FEEDER

Table 45: Loss analysis – Veliyanoor

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
SS	P1	Substation feeder			**UG**	81										
P29	24	Aquatic	Dept	LT	**OH**	8										
					UG	81	39,985	0.26	31,677	7,541	39,218	242.34	39,461	250	0.87	524
					OH	100	39,985	0.91								
LBS	01,02	Aswani Hospital	Client	HT	**UG**	40										
					UG	40	1,06,340	1.80								
					UG	122	1,06,340	2.74								
					OH	92	1,06,340	5.90								
G3	15	SG Complex	Client	HT	**UG**	18										
					UG	18	6,808	0.00								
					UG	81	6,808	0.01								
					OH	444	6,808	0.12								
G4	3	Govind Appartment	Client	LT	**UG**	24										
					UG	24	5,255	0.00			4,952	0.54	4,952	200	0.50	303
					UG	81	5,255	0.00								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	446	5,255	0.07								
P6	AB1,P32, P32'29	AB Swimming pool, AB silver rox, ABL50702, Swimming Pool	Department	LT	**OH**	49										
					UG	81	54,930	0.48	44,301	9,833	54,135	162.37	54,297	250	1.05	633
					OH	289	54,930	4.95								
RMU1	28	Silver Roxx	Client	LT	**UG**	11										
					UG	11	10,910	0.00			10,597	1.68	10,598	200	0.52	312
					UG	167	10,910	0.04								
					OH	339	10,910	0.23								
P33	14	Kalindi	Client	LT	**UG**	57										
					UG	137	8,168	0.02			7,623	1.74	7,624	315	0.91	543
					OH	403	8,168	0.15								
G19	4	Bhima	Client	HT	**UG**	62										
					UG	386	1,485	0.00								
					OH	339	1,485	0.00								
P35	5	Vanvita	Client	HT	**UG**	31										
					UG	355	21,026	0.31								
					OH	514	21,026	1.29								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
P10	6	Capital Manner	Department	LT	**OH**	7										
					UG	570	61,711	4.30	49,832	10,887	60,719	298.74	61,018	250	1.16	694
					OH	601	61,711	12.97								
P37	11	Sree Krishna Appartment	Client	LT	**UG**	108										
					UG	678	7,235	0.07			6,828	1.58	6,830	250	0.68	406
					OH	878	7,235	0.26								
P15	P38,07	AB-Souparnika, Souparnika	Department	LT	**OH**	4										
					UG	570	79,767	7.19	63,051	14,939	77,990	867.05	78,857	315	1.52	910
					OH	720	79,767	25.95								
G12	RMU2, 16	RMU30702, Mukundha Appartment	Client	LT	**UG**	48										
					UG	831	3,683	0.02			3,405	0.84	3,406	160	0.46	278
					OH	733	3,683	0.06								
P39	8	Satyam	Client	LT	**UG**	48										
					UG	918	6,577	0.08			6,295	0.48	6,295	160	0.47	282
					OH	733	6,577	0.18								
LBS(G)	12	Shivam	Client	LT	**UG**	39										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	910	4,784	0.04			4,505	0.49	4,505	160	0.46	279
					OH	733	4,784	0.10								
P40	9	Sree Hari	Client	LT	**UG**	32										
					UG	32	3,105	0.00			2,828	0.19	2,828	160	0.46	277
					UG	783	3,105	0.01								
					OH	845	3,105	0.05								
P20-1	13	Mannath Lane	Department	LT	**OH**	7										
					UG	783	21,967	0.75	20,014	1,505	21,519	10.26	21,529	250	0.73	438
					OH	1,052	21,967	2.87								
P41	10	Ambika Arcades	Client	LT	**UG**	61										
					UG	844	8,517	0.12			8,108	2.23	8,110	250	0.68	407
					OH	1,088	8,517	0.45								
P27	P45, 23	AB-Music Park, Music Park	Department	LT	**OH**	7										
					UG	783	65,885	6.74	52,142	12,565	64,706	386.63	65,093	315	1.32	792
					OH	1,113	65,885	27.38								
G19-1	25	Anamya Tower	Client	LT	**UG**	52										
					UG	835	9,639	0.15			9,228	3.10	9,231	250	0.68	409
					OH	1,113	9,639	0.59								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
P27	P28, 26	Post, Karuvan	Department	LT	**OH**	74										
					UG	783	56,329	4.93	45,218	10,245	55,463	142.03	55,605	315	1.21	724
					OH	1,180	56,329	21.21								
G28-1	RMU4 ,30	RMU30703, Brahmasam Madom	Client	HT	**UG**	49										
					UG	831	32,890	1.78								
					OH	1,180	32,890	7.23								
P47	22	Capital Heritage	Client	LT	**UG**	27										
					UG	848	4,916	0.04			4,636	0.32	4,637	160	0.47	279
					OH	1,147	4,916	0.16								
G21	21	Temple Tree	Client	LT	**UG**	88										
					UG	941	6,698	0.08			6,292	0.24	6,292	250	0.68	405
					OH	1,147	6,698	0.29								
P50	19	Karthiayini	Client	LT	**UG**	124										
					UG	124	5,833	0.01			5,549	3.17	5,552	160	0.47	280
					UG	853	5,833	0.06								
					OH	1,162	5,833	0.22								
P51	20	Leo Enterprises	Client	HT	**UG**	50										
					UG	1,104	8,165	0.15								
					OH	1,147	8,165	0.43								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
P52	18	Cochin Hall Mark	Client	HT	**UG**	21										
					UG	1,075	5,379	0.06								
					OH	1,147	5,379	0.19								
					ABC	23	5,379	0.00								
G18-1	RMU5, 17	RMU30704, Thiruvambadi Devasm	Client	HT	**UG**	337										
					UG	1,191	12,660	0.38								
					OH	1,162	12,660	1.06								
RMU5	27	Vrindavan Hotel	Client	HT	**UG**	51										
					UG	1,241	11,599	0.33								
					OH	1,162	11,599	0.89								
		SUM						**149.13**		**67,515**		**2,126.04**				**9,877**

3.3 KOORKKENCHERY FEEDER

Table 46: Loss analysis – Koorkkenchery

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
	S-S	Substation feeder														
S-S	P1	Post			**UG**	11										
	1	Commercial	Department	LT												
					UG	989	67,670	8.98	48,214	18,364	66,578	64	66,863	315	1	806
					OH	217	67,670	5.63			66,578	221				
G4	2	Casino	Client	HT	**UG**	67										
					UG	67	44,523	0.33								
					UG	1,020	44,523	4.01								
					OH	217	44,523	2.44								
G5	3	Smart Centre	Client	LT	**UG**	103										
					UG	1,092	2,126	0.01			1,866	0.3	1,867	100	0.4	259
					OH	377	2,126	0.01			1,866					
G6	4	Sree Sailam	C/D	LT	**UG**	116										
					UG	1,105	8,588	0.16	8,041	135	8,175	1	8,180	250	1	407
					OH	470	8,588	0.20			8,175	2				
											8,175	2				
P9-1	5	Metro	Client	HT	**UG**	104										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	104	37,468	0.47								
					UG	989	37,468	2.75								
					OH	697	37,468	5.54								
RMU3	26	CK Plaza	Client	LT	**UG**	54										
					UG	1,053	11,080	0.26			10,783	4	10,787	160	0.5	293
					OH	736	11,080	0.51								
P10	6	Alumkulam	Department	LT	**OH**	27										
					UG	989	43,375	3.69	32,460	10,345	42,805	24	42,829	250	1	546
					OH	763	43,375	8.13								
G7	10	Thankamani	Department	LT	**UG**	199										
					UG	199	84,213	3.44	58,538	24,666	83,204	64	83,268	250	2	945
					UG	989	84,213	13.91								
					OH	763	84,213	30.66								
P11-1	8	Skyline	Client	LT	**UG**	32										
					UG	199	17,592				16,825	12	16,837	630	1	755
					UG	1,020	17,592	0.63								
					OH	876	17,592	1.54								
P13-1	9	Love-Shore	Client	LT	**UG**	108										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	108	12,508	0.07			11,737	7	11,744	700	1	764
					UG	199	12,508	0.08								
					UG	989	12,508	0.31								
					OH	993	12,508	0.88								
P13	7	Kaja	Department	LT	**OH**	47										
					UG	199	74,931	2.72	51,468	22,397	73,865	133	74,099	250	1	832
					UG	989	74,931	11.02			73,865	101				
					OH	1,025	74,931	32.61								
RMU4	11	Mannanthara Agencies	Client	LT	**UG**	57										
					UG	1,076	7,866	0.13			7,580	2	7,582	160	0.5	284
					OH	1,009	7,866	0.35								
P17	15	Smart City	Client	LT	**OH**	15										
					UG	989	11,695	0.27	10,758	512	11,270	9	11,283	250	1	412
					OH	1,293	11,695	1.00			11,270	4				
15	24	I-Vision	Client	HT	**UG**	142										
					UG	1,131	7,201	0.12								
					OH	1,293	7,201	0.38								
P18	17	Hi-Life	Client	LT	**UG**	173										
					UG	1,161	2,880	0.02			2,619	1	2,620	100	0.4	260
					OH	1,398	2,880	0.07								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
RMU5	25	Shangri-La-Fortune	Client	LT	**UG**	53										
					UG	1,057	9,163	0.18			8,498	2	8,500	400	1	663
					OH	1,451	9,163	0.69								
AB4	16	Sun City	C/D	LT	**OH**	51										
					UG	989	1,01,635	20.27	69,204	29,995	99,199	239	1,00,493	315	2	1,141
					OH	1,502	1,01,635	87.89			99,199	1,056				
P21	13	Kanjirangadi	Department	LT	**OH**	184										
					UG	989	78,381	12.05	58,765	18,384	77,148	361	77,509	250	1	872
					OH	1,522	78,381	52.98								
G8	14	Q-Appartment	Client	LT	**UG**	97										
					UG	1,086	2,330	0.01			2,071	0.2	2,071	100	0.4	259
					OH	1,731	2,330	0.05								
P20	12	Kinar	Department	LT	**OH**	28										
					UG	989	63,165	7.83	45,477	16,839	62,316	141	62,458	250	1	707
					OH	1,366	63,165	30.87			62,316					
P5	18	Veterinary	Department	LT	**OH**	12										
					UG	989	21,718	0.93	20,015	1,255	21,270	11	21,281	250	1	437

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	322	21,718	0.86								
18	19	Dee Pee Plaza	Department	LT	**OH**	66										
					UG	989	45,333	4.03	40,502	4,004	44,506	168	44,674	315	1	659
					OH	388	45,333	4.52								
P21	20	Dhanya	Department	LT	**OH**	7										
					UG	989	1,25,521	30.91	95,093	28,318	1,23,411	506	1,23,917	250	3	1,604
					OH	569	1,25,521	50.80								
P21-1	22,23	Railway	Client	HT,HT	**UG**	128										
					UG	128	72,387	2.15								
					UG	989	72,387	10.28								
					OH	590	72,387	17.51								
AB6	21	Ice Plant	Client	LT	**OH**	35										
					UG	989	43,176	3.66			42,343	43	42,387	100	1	789
					OH	713	43,176	7.54								
RMU7	27	Forus Apartment	Client	LT	**UG**	22										
					UG	22	2,575	0.00			2,298	0.1	2,298	160	0.5	277
					UG	1,708	2,575	0.02								
					OH	679	2,575	0.03								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
			SUM					489.36		1,75,214		3,179				

3.4 PARAVATTANY FEEDER

Table 47: Loss analysis – Paravattany

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
	S-S	Substation feeder														
S-S-2	2P	Post			**UG**	-										
P1-1	11	Jose pottokoran	Client	LT	**UG**	38										
					UG	999	12,393	0.30			12,072	4.8	12,077	200	0.53	315

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	34	12,393	0.03								
P1-1	10428	Lifescan (315 kVA)	Client	HT	**UG**	18										
					UG	979	28,890	1.96								
					OH	34	28,890	0.19								
P2	ABn, Fathima	ABL New, Fathima (250 kVA)	Distribution	LT	**OH**	55										
					UG	961	77,276	11.15	59,780	16,439	76,219	59.8	76,426	250	1.42	850
					OH	167	77,276	5.53			76,219	147.1				
P2-1	9	Manjali Enclave	Client	LT	**UG**	40										
					UG	40	3,125	0.00			2,848	0.1	2,848	160	0.46	277
					UG	961	3,125	0.02								
					OH	176	3,125	0.01								
P3-1	1	YAS Residency/TT Complex	Client	LT	**UG**	51										
					UG	1,012	7,956	0.12			7,671	0.7	7,671	160	0.47	284
					OH	311	7,956	0.11								
P4-1	12	Cedar Appartment	Client	LT	**UG**	54										
					UG	1,015	12,890	0.33			12,218	5.3	12,224	400	1.11	666

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	503	12,890	0.46								
					ABC	34	12,890	0.02								
AB3	2	Andrews	Distribution	LT	**OH**	6										
					UG	961	83,254	12.94	67,898	14,137	82,035	121.7	82,332	250	1.54	922
					OH	621	83,254	23.89			82,035	175.7				
P7	10	In Land/Fortune Appartment	Client	LT	**UG**	15										
					UG	1,226	5,692	0.08			5,387	2.1	5,389	200	0.51	303
					OH	757	5,692	0.14								
RMU10	23	CIDBI Appartment	Client	LT	**UG**	70										
					UG	70	6,755	0.01			6,092	1.9	6,094	400	1.10	661
					UG	1,380	6,755	0.12								
					OH	757	6,755	0.19								
P8-1	25	Pentark East Park	Client	LT	**UG**	61										
					UG	61	5,393	0.01			5,090	0.6	5,091	200	0.50	303
					UG	1,463	5,393	0.08								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	900	5,393	0.15								
P10-1	8	Wheels Appartment	Client	LT	**UG**	27										
					UG	27	2,111	0.00			1,834	0.2	1,834	160	0.46	276
					UG	961	2,111	0.01								
					OH	1,064	2,111	0.03								
AB3	RMU1, 24	RMU30401, SNA	Client	HT	**UG**	150										
					UG	1,111	14,038	0.53								
					OH	621	14,038	0.84								
AB4	P5, 3	Post, Unnimossa	Distribution	LT	**OH**	11										
					UG	1,217	55,949	7.40	45,835	8,375	54,211	86.4	55,312	250	1.06	637
					OH	632	55,949	10.98			54,211	26.3				
											54,211	988.6				
AB4	RMU2, 14	RMU30402, Sundale Appartment	Client	LT	**UG**	68										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	1,853	6,229	0.14			5,925	1.0	5,926	200	0.51	304
					OH	621	6,229	0.13								
RMU2	RMU3, 27	RMU30403, Able Tower	Distribution	LT	**UG**	158										
					UG	2,011	14,955	0.87	14,293	633	14,925	3.6	14,955	250	-	-
					OH	621	14,955	0.77			14,925	15.9				
											14,925	9.8				
P5	16	Homeo	Distribution	LT	**OH**	163										
					UG	1,217	44,999	4.79	35,018	9,025	44,043	133.5	44,177	100	1.37	823
					OH	796	44,999	8.94								
AB6	5	Paravattani Park	Distribution	LT	**OH**	115										
					UG	1,217	1,21,928	35.15	99,578	21,286	1,20,864	-	1,20,864	500	1.77	1,064
					OH	1,116	1,21,928	92.05								
RMU7	15	GEM Hospital	Client	HT	**UG**	55										
					UG	1,317	22,005	1.53								
					OH	1,206	22,005	4.00								
P13	6	Paravattani	Dept	LT	**OH**	161										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/Month**	**kWh/month**	**kWh/Month**	**kWh/month**	**kWh/month**	**kWh/month**	**kWh/month**	**kVA**	**kW**	**KWh/month**
					UG	1,267	1,14,482	32.26	92,415	18,334	1,10,749	270.3	1,13,099	250	2.30	1,383
					OH	1,599	1,14,482	116.29			1,10,749	332.7				
											1,10,749	1,746.9				
P14-1	18	Store	Dept	LT	**UG**	110										
					UG	1,377	1,235	0.00	955	4	958	0.1	959	160	0.46	276
					OH	1,951	1,235	0.02			958	0.0				
											958	0.1				
AB6	17	Double Horse	DEPT	LT	**OH**	163										
					UG	632	14,032	0.24	12,625	1,022	13,647	4.4	13,720	100	0.52	312
					OH	1,164	14,032	1.27			13,647	68.2				
RMU8	26	Asset Precious	Client	LT	**UG**	43										
					UG	696	17,534	0.42			16,859	3.5	16,863	400	1.12	671
					OH	1,389	17,534	2.37								
AB7	13	Deepak Tom	Client	HT	**UG**	166										
					UG	798	12,644	0.31								
					OH	1,576	12,644	1.73								
13	RMU9, 22	RMU30409, Sisters	C/D	LT	**UG**	61										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	859	53,673	4.81	39,460	13,494	52,954	101.4	53,055	250	1.03	618
					OH	1,576	53,673	25.20				-				
AB7	AB8, 7	Kankapadan, ABI-50107	Distribution	LT	**OH**	80										
					UG	939	60,067	6.58	49,495	9,766	59,262	133.4	59,395	250	1.12	673
					OH	1,576	60,067	31.56								
G10	P17, 30 (D)	4TH STREET KIZAHAKUMPATTUKARA,	Distribution	LT	**UG**	147										
					UG	1,585	19,703	1.20	17,087	2,220	19,307	6.2	19,337	100	0.61	366
					OH	632	19,703	1.36			19,307	22.2				
											19,307	1.4				
G12	AB10, 4	ABL-50407/ABL-50408, Ottu company	Distribution	LT	**UG**	24										
					UG	2,007	73,612	21.13	59,294	12,938	72,232	76.7	72,591	160	1.70	1,021
					OH	632	73,612	19.01			72,232	283.1				

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
G17	RMU2, 19	RMU-30404, Pookuzhypadam	DEPT	LT	**UG**	144										
					UG	2,200	45,142	8.71	36,890	7,512	44,402	43.5	44,588	250	0.92	554
					OH	632	45,142	7.15			44,402	142.6				
RMU3	20	Mystic Rose	Client	LT	**UG**	46										
					UG	46	13,627	0.03			12,949	11.8	12,960	400	1.11	667
					UG	2,719	13,627	0.98								
					OH	632	13,627	0.65								
RMU4	21	Nirmalamatha	Client	HT	**UG**	139										
					UG	139	106	0.00001								
					UG	2,848	106	0.00008								
					OH	632	106	0.00005								
		NET SUM						**509.26**		**1,35,185**		**5,033.6**				**14,226**

3.5 ARNATUKARA FEEDER

Table 48: Loss analysis – Arnatukara

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
SS	2P	Post			**UG**	21										
2P	G1	Ground			**UG**	-										
G15	RMU2,1	RMU30502, Mothimahal	Client	HT	**UG**	419										
					UG	2,931	29,326	6.05								
					OH	-	29,326	-								
P6	RMU3,3	RMU30503, Ambilikala arcade	Client	LT	**UG**	47										
					UG	3,148	402	0.00				-	-	250	0.7	402
					UG	47	402	0.00			-	-				
					OH	39	402	0.00								
G18	RMU4, 5	RMU30504, VRM tower	Client	LT	**UG**	83										
					UG	3,148	276	0.00				-	-	160	0.5	276
					UG	83	276	0.00			-	-				
					OH	102	276	0.00								
P8	AB3, 16	ABL50506, Krishnamani	Dept	LT	**OH**	80										
					UG	3,148	1,46,393	131.08	1,03,637	39,525	1,43,162	729.8	1,44,633	315	2.9	1,760

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	182	1,46,393	21.70			1,43,162	741.3				
AB4	17	Pentarc	Client	LT	**UG**	32										
					UG	3,414	15,367	1.57			14,608	5.5	14,613	630	1.3	754
					UG	32	15,367	0.02			14,608	-				
					OH	182	15,367	0.24								
P9	7	Ashtapati Appartment	Client	LT	**UG**	53										
					UG	3,414	5,618	0.21			5,076	0.2	5,076	315	0.9	542
					UG	53	5,618	0.00			5,076	-				
					OH	225	5,618	0.04								
P11	10	Routh Tower1	Client	HT	**UG**	288										
					UG	3,709	7,286	0.47								
					OH	328	7,286	0.12								
P11	14	Routh Tower2	Client	LT	**UG**	288										
					UG	3,709	15,369	1.70			14,693	7.8	14,701	400	1.1	669
					OH	328	15,369	0.43			14,693	-				
P12-1	18, 19	Centre Point 1, 2	Client	HT, HT	**UG**	46										
					UG	3,194	12,844	1.27								
					OH	237	12,844	0.27								
P12-1	20	Centre Point 3	Client	LT	**UG**	38										
					UG	3,185	2,981	0.06			2,704	0.1	2,704	160	0.5	277

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	237	2,981	0.01			2,704	-				
RMU PCK	43	PCK Centenery	Client	LT	**UG**	58										
					UG	3,205	2,437	0.04			2,160	0.2	2,160	160	0.5	277
					OH	272	2,437	0.01			2,160	-				
P14-1	22	Kochu Bhavan	Client	LT	**OH**	36										
					UG	3,148	1,316	0.01			914	0.0	914	250	0.7	402
					OH	335	1,316	0.00			914	-				
P14-1	21	HDFC	Client	LT	**UG**	34										
					UG	3,181	8,713	0.47			8,298	8.2	8,306	250	0.7	407
					OH	298	8,713	0.13			8,298	-				
P15	23	Colour House	Client	HT	**UG**	65										
					UG	3,213	18,009	2.50								
					OH	321	18,009	0.71								
P15	AB5,9	ABL50507, Spoon	Client	LT	**UG**	48										
					UG	3,196	17,010	1.80			16,574	3.3	16,587	250	0.7	423
					OH	321	17,010	0.51			16,574	9.9				
P16-1	11	Income Tax Office	Client	HT	**UG**	47										
					UG	3,243	6,170	0.30								
					OH	345	6,170	0.09								
P17	42	P17-1, Parayil Lane	Dept	LT	**OH**	10										
					UG	3,196	22,192	3.06	20,805	796	21,602	23.3	21,625	315	0.9	567

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	413	22,192	1.13			21,602	-				
P17-1	24	Presidency	Client	LT	**OH**	6										
					UG	3,196	2,113	0.03			1,854	0.2	1,854	100	0.4	259
					OH	419	2,113	0.01			1,854	-				
P18-1	41	Jaya Lakshmi Silks	Client	HT	**UG**	58										
					UG	3,254	1,03,447	83.64								
					OH	487	1,03,447	35.76								
P19-1	25	Malabar Gold	Client	HT	**UG**	53										
					UG	3,201	15,373	1.82								
					OH	477	15,373	0.77								
P21-1	8	Link Offset	Client	HT	**UG**	68										
					UG	3,476	7,843	0.51								
					OH	651	7,843	0.27								
P22	30	MRG Samyuktha Appartment	Dept	LT	**OH**	15										
					UG	3,408	24,876	4.10	21,944	2,363	24,307	7.0	24,428	250	0.7	448
					OH	728	24,876	2.50			24,307	114.6				
30	31	VIP Appartment	Client	LT	**OH**	8										
					UG	3,408	5,852	0.23			5,305	5.9	5,311	315	0.9	542
					OH	736	5,852	0.14			5,305	-				

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
P22	29	Mental Hospital	Dept	LT	**OH**	128										
					UG	3,408	24,842	4.09	24,370	-	24,370	23.6	24,394	250	0.7	448
					OH	841	24,842	2.88			24,370	-				
29	6	Nethaji Ground	Dept	LT	**OH**	7										
					UG	3,408	47,478	14.93	35,351	11,497	46,848	59.5	46,908	250	1.0	571
					OH	849	47,478	10.61			46,848	-				
AB8	32	Toppin Moola	Dept	LT	**OH**	465										
					UG	3,408	85,008	47.85	55,268	28,101	83,369	82.5	83,742	160	2.1	1,267
					OH	1,314	85,008	52.67			83,369	290.4				
RMU7	2	Confident Gemini	Client	LT	**UG**	290										
					UG	3,698	11,237	0.91			10,688	1.7	10,690	315	0.9	547
					OH	1,314	11,237	0.92			10,688	-				
AB10	33	Malayalam School	Dept	LT	**OH**	16										
					UG	3,408	86,480	49.52	56,146	29,001	85,147	157.3	85,517	250	1.6	963
					OH	1,678	86,480	69.64			85,147	213.4				
AB10	P27, 34	Post, Aranatukara Market	Dept	LT	**OH**	209										
					UG	3,408	96,775	62.02	60,643	33,833	94,476	80.7	95,701	315	1.8	1,074
					OH	1,663	96,775	86.40			94,476	1,144 .1				

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
P28	P29, 35	Laloor	Dept	LT	**OH**	12										
					UG	3,651	90,113	57.61	57,913	30,856	88,769	71.3	89,102	250	1.7	1,011
					OH	1,884	90,113	84.89			88,769	261.9				
P30	RMU8, 38	RMU-30507, Global Plaza	Client	LT	**UG**	10										
					UG	3,418	52,746	18.48			52,020	27.8	52,086	160	1.1	659
					OH	1,424	52,746	21.98			52,020	38.5				
RMU9	39	Le-shore	Client	LT	**UG**	68										
					UG	3,486	1,802	0.02			1,262	0.2	1,262	315	0.9	540
					OH	1,424	1,802	0.03			1,262	-				
P30	P31, 37	Maani	Dept	LT	**OH**	184										
					UG	3,486	56,802	21.85	40,750	15,277	56,026	39.7	56,158	250	1.1	644
					OH	1,608	56,802	28.78								
											56,026	92.4				
RMU10	40	Govind Green Appartment	Client	LT	**UG**	62										
					UG	3,548	2,696	0.05			2,419	0.1	2,419	160	0.5	277
					OH	1,608	2,696	0.06			2,419	-				
P32-3	15	Kizhakkepuram	Dept	LT	**OH**	530										
					UG	3,486	94,499	60.49	59,900	33,009	92,908	265.4	93,428	250	1.8	1,071
					OH	2,382	94,499	118.03								
											92,908	254.1				
P33	36	AAZ Complex	C/D	LT	**OH**	12										
					UG	3,486	30,333	6.23	24,831	4,916	29,747	115.5	29,863	250	0.8	470

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	1,874	30,333	9.57			29,747	-				
					OH	12	30,333	0.05								
P34	P35, 13	Excise	Dept	LT	**OH**	249										
					UG	3,486	16,020	1.74	14,330	1,260	15,590	5.3	15,599	250	0.7	421
					OH	2,123	16,020	3.02			15,590	4.0				
G31	27	Sai Service	Client	HT	**UG**	202										
					UG	3,692	10,684	1.01								
					OH	2,141	10,684	1.68								
P36-1	12	Cheloor	Client	LT	**UG**	90										
					UG	3,576	20,449	2.91			19,614	13.9	19,627	750	1.4	821
					OH	2,206	20,449	5.12			19,614	-				
P38	28	C A Arcade	Client	LT	**UG**	24										
					UG	3,510	14,858	1.51			14,438	2.1	14,440	250	0.7	418
					OH	2,180	14,858	2.67			14,438	-				
P37-1	26	Excise Acadamy	Client	HT	**UG**	43										
					UG	3,529	8,717	0.64								
					OH	2,195	8,717	1.14								
P39	P40,4	P&T Poothole	Dept	LT	**OH**	158										
					UG	3,486	10,119	0.69	9,301	265	9,566	4.0	9,574	315	0.9	545
					OH	2,338	10,119	1.33			9,566	3.8				
			SUM					**1,159.79**		**2,30,699**		**4,910.8**				**20,026**

3.6 JUBILEE MISSION COLLEGE FEEDER

Table 49: Loss analysis – JMC

Mapping details					Up to Transformer primary or HT metering			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**
						m	**kWh/ Month**	**kWh/month**
SS		Substation feeder			UG	10		
G17	01, 02 - Jubilee Mission	Jubilee Mission	Client	HT	**UG**	2,811		
					UG	2,821	7,33,610	4,017
			NET SUM					**4017**

3.7 VIVEKODHAYAM FEEDER

Table 50: Loss analysis – Vivekodhayam

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
SS	P1	Substation feeder			UG	81										
P29	24	Aquatic(Sai)	Dept	LT	OH	8										
					UG	81	39,985	0.26	31,677	7,541	39,218	242.34	39,461	250	0.87	524
					OH	100	39,985	0.91								
LBS	01,02	Aswani Hospital	Client	HT	UG	40										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/ Month	kWh/ month	kWh/ month	kWh/ month	kWh/month	kVA	kW	KWh/ month
					UG	40	1,06,340	1.80								
					UG	122	1,06,340	2.74								
					OH	92	1,06,340	5.90								
G3	15	SG Complex	Client	HT	UG	18										
					UG	18	6,808	0.00								
					UG	81	6,808	0.01								
					OH	444	6,808	0.12								
G4	3	Govind Appartment	Client	LT	UG	24										
					UG	24	5,255	0.00			4,952	0.54	4,952	200	0.50	303
					UG	81	5,255	0.00								
					OH	446	5,255	0.07								
P6	AB1,P32, P32'29	AB Swimming pool, AB silver rox, ABL50702, Swimming Pool TR	Dept	LT	OH	49										
					UG	81	54,930	0.48	44,301	9,833	54,135	162.37	54,297	250	1.05	633
					OH	289	54,930	4.95								
RMU1	28	Silver Roxx	Client	LT	UG	11										
					UG	11	10,910	0.00			10,597	1.68	10,598	200	0.52	312
					UG	167	10,910	0.04								
					OH	339	10,910	0.23								
P33	14	Kalindi	Client	LT	UG	57										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/ Month	kWh/ month	kWh/ month	kWh/ month	kWh/month	kVA	kW	KWh/ month
					UG	137	8,168	0.02			7,623	1.74	7,624	315	0.91	543
					OH	403	8,168	0.15								
G19	4	Bhima	Client	HT	UG	62										
					UG	386	1,485	0.00								
					OH	339	1,485	0.00								
P35	5	Vanvita	Client	HT	UG	31										
					UG	355	21,026	0.31								
					OH	514	21,026	1.29								
P10	6	Capital Manner	Dept	LT	OH	7										
					UG	570	61,711	4.30	49,832	10,887	60,719	298.74	61,018	250	1.16	694
					OH	601	61,711	12.97								
P37	11	Sree Krishna Appartment	Client	LT	UG	108										
					UG	678	7,235	0.07			6,828	1.58	6,830	250	0.68	406
					OH	878	7,235	0.26								
P15	P38,07	AB-Souparnika, Souparnika	Dept	LT	OH	4										
					UG	570	79,767	7.19	63,051	14,939	77,990	867.05	78,857	315	1.52	910
					OH	720	79,767	25.95								
G12	RMU2, 16	RMU30702, Mukundha Appartment	Client	LT	UG	48										
					UG	831	3,683	0.02			3,405	0.84	3,406	160	0.46	278
					OH	733	3,683	0.06								
P39	8	Satyam	Client	LT	UG	48										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/ Month	kWh/ month	kWh/ month	kWh/ month	kWh/month	kVA	kW	KWh/ month
					UG	918	6,577	0.08			6,295	0.48	6,295	160	0.47	282
					OH	733	6,577	0.18								
LBS (G)	12	Shivam	Client	LT	UG	39										
					UG	910	4,784	0.04			4,505	0.49	4,505	160	0.46	279
					OH	733	4,784	0.10								
P40	9	Sree Hari	Client	LT	UG	32										
					UG	32	3,105	0.00			2,828	0.19	2,828	160	0.46	277
					UG	783	3,105	0.01								
					OH	845	3,105	0.05								
P20 -1	13	Mannath Lane(NP Tower)	Dept	LT	OH	7										
					UG	783	21,967	0.75	20,014	1,505	21,519	10.26	21,529	250	0.73	438
					OH	1,052	21,967	2.87								
P41	10	Ambika Arcades	Client	LT	UG	61										
					UG	844	8,517	0.12			8,108	2.23	8,110	250	0.68	407
					OH	1,088	8,517	0.45								
P27	P45, 23	AB-Music Park, Music Park	Dept	LT	OH	7										
					UG	783	65,885	6.74	52,142	12,565	64,706	386.63	65,093	315	1.32	792
					OH	1,113	65,885	27.38								
G19 -1	25	Anamya Tower	Client	LT	UG	52										
					UG	835	9,639	0.15			9,228	3.10	9,231	250	0.68	409
					OH	1,113	9,639	0.59								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/ Month	kWh/ month	kWh/ month	kWh/ month	kWh/month	kVA	kW	KWh/ month
P27	P28, 26	Post, Karuvan	Dept	LT	OH	74										
					UG	783	56,329	4.93	45,218	10,245	55,463	142.03	55,605	315	1.21	724
					OH	1,180	56,329	21.21								
G28 -1	RMU4 ,30	RMU30703, Brahmasam Madom	Client	HT	UG	49										
					UG	831	32,890	1.78								
					OH	1,180	32,890	7.23								
P47	22	Capital Heritage	Client	LT	UG	27										
					UG	848	4,916	0.04			4,636	0.32	4,637	160	0.47	279
					OH	1,147	4,916	0.16								
G21	21	Temple Tree	Client	LT	UG	88										
					UG	941	6,698	0.08			6,292	0.24	6,292	250	0.68	405
					OH	1,147	6,698	0.29								
P50	19	Karthiayini	Client	LT	UG	124										
					UG	124	5,833	0.01			5,549	3.17	5,552	160	0.47	280
					UG	853	5,833	0.06								
					OH	1,162	5,833	0.22								
P51	20	Leo Enterprises	Client	HT	UG	50										
					UG	1,104	8,165	0.15								
					OH	1,147	8,165	0.43								
P52	18	Cochin Hall Mark	Client	HT	UG	21										
					UG	1,075	5,379	0.06								
					OH	1,147	5,379	0.19								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					ABC	23	5,379	0.00								
G18-1	RMU5, 17	RMU30704,Thiruvambadi Devasm	Client	HT	UG	337										
					UG	1,191	12,660	0.38								
					OH	1,162	12,660	1.06								
RMU5	27	Vrindavan Hotel	Client	HT	UG	51										
					UG	1,241	11,599	0.33								
					OH	1,162	11,599	0.89								
		SUM						**149.13**		**67,515**		**2,126.04**				**9,877**

3.8 BINI FEEDER

Table 51: Loss analysis – Bini feeder

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**kWh/ month**
	SS	Substation														
SS	2P	2P			**UG**	10										
RMU-30801	2	TT Devassy	Client	HT	**UG**	20										
					UG	104	10,635	0.03								
					OH	374	10,635	0.32								
P20	P7,29	Vadakke chira	Department	LT	**OH**	159										
					UG	74	18,587	0.05	16,815	1,328	18,143	12	18,159	250	0.71	428
					OH	785	18,587	1.54			18,143	4				
P8	4	Lake View	Client	LT	**UG**	31										
					UG	105	5,830	0.01			5,549	1	5,550	160	0.47	280
					OH	812	5,830	0.16								
P10	5	Seethal Appartment	Client	LT	**UG**	51										
					UG	126	7,880	0.02			7,470	3	7,473	250	0.68	406
					OH	979	7,880	0.34								
P10-1	6	Kalyan Jewellers	Client	HT	**UG**	71										
					UG	71	27,653	0.18								
					UG	74	27,653	0.15								
					OH	1,002	27,653	5.79								
P12	1	Mangala Tower	Client	HT	**UG**	21										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**kWh/ month**
					UG	21	26,947	0.06								
					UG	74	26,947	0.14								
					OH	454	26,947	2.49								
P13	3	Paliyam Road	Department	LT	**OH**	7										
					UG	74	66,248	0.65	52,344	13,042	65,385	124	65,510	250	1.23	738
					OH	573	66,248	14.25								
P13-1	26	Ashiana Appartments	Client	LT	**UG**	56										
					UG	56	10,448	0.01								
					UG	74	10,448	0.02			9,900	2	9,902	315	0.91	546
					OH	573	10,448	0.35								
ABL-50803	10	Pallithammam	Department	LT	**UG**	92										
					UG	92	27,178	0.17								
					UG	74	27,178	0.11	25,896	798	26,694	14	26,720	250	0.76	458
					OH	786	27,178	3.29			26,694	12				
10	LBS,16	SBI- Pallithammam	Client	HT	**UG**	22										
					UG	22	11,403	0.01								
					UG	92	11,403	0.04								
					UG	74	11,403	0.03								
					OH	786	11,403	0.77								
LBS	12	Elite Supermarket (Pallithammam)	Client	HT	**UG**	6										
					UG	6	34,834	0.03								
					UG	92	34,834	0.36								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**kWh/ month**
					UG	74	34,834	0.24								
					OH	786	34,834	7.20								
LBS	11	Pallithammam (Indoor)	Client	LT	**UG**	15										
					UG	15	20,327	0.02								
					UG	92	20,327	0.09								
					UG	74	20,327	0.06			19,750	14	19,764	315	0.94	563
					OH	786	20,327	1.84								
LBS	13	Kairali Sree Theatre 1	Client	LT	**UG**	54										
					UG	15	1,717	0.00								
					UG	16	1,717	0.00								
					UG	74	1,717	0.00			1,417	0	1,417	200	0.50	300
					OH	786	1,717	0.01								
P15	8	Cochin Dewasm Board	Department	LT	**OH**	11										
					UG	74	40,877	0.25	39,830	99	39,930	197	40,156	500	1.20	721
					OH	819	40,877	7.75			39,930	29				
P16-2	9	Kailasam	Client	LT	**UG**	42										
					UG	117	2,690	0.00			2,413	0	2,413	160	0.46	277
					OH	944	2,690	0.04								
G2	24	Vegetable	Department	LT	**UG**	309										
					UG	390	51,467	2.05	46,069	4,652	50,721	52	50,773	315	1.16	694
					OH	814	51,467	12.22								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**kWh/ month**
G2	17	Dhanalakshmi Bank	Client	HT	**UG**	74										
					UG	464	31	0.00								
					OH	814	31	0.00								
P18	15	Chemmannur	Client	HT	**UG**	64										
					UG	64	8,681	0.02								
					UG	390	8,681	0.08								
					OH	841	8,681	0.48								
G7	21	Naduvilal(Pooma)	Department	LT	**UG**	22										
					UG	850	53,043	4.75	46,900	5,511	52,411	15	52,426	250	1.03	617
					OH	814	53,043	12.98								
21	20	Pooma Complex	Client	LT	**UG**	31										
					UG	31	18,175	0.04								
					UG	881	18,175	0.58			17,609	7	17,616	315	0.93	558
					OH	814	18,175	1.52								
P23	23, P23-1	Naduvial Shopping complex, Post	Department	LT	**OH**	61										
					UG	850	8,540	0.12	8,106	25	8,131	2	8,133	250	0.68	407
					OH	883	8,540	0.36								
P23-1	19	Sidish Complex	Client	LT	ABC	19										
					ABC	19	4,163	0.00			3,899	2	3,901	100	0.44	262
					UG	850	4,163	0.03								
					OH	883	4,163	0.09								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer /AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**kWh/ month**
AB-Ayodhya	18	Ayodhya centre	Client	LT	**UG**	33										
					UG	33	24,028	0.08								
					UG	943	24,028	1.08			23,450	5	23,455	315	0.95	573
					OH	883	24,028	2.89								
AB-Chungath	22	P22, Chugath Jewellery	Client	HT	**UG**	10										
					UG	860	8,637	0.17								
					OH	905	8,637	0.51								
P24	RMU-30802, 28	RMU-30802, National Lodge	Client	HT	**UG**	49										
					UG	909	7,849	0.15								
					OH	887	7,849	0.41								
P26	27	Maheswari Appartment	Client	HT	**UG**	29										
					UG	880	7,849	0.14								
					OH	933	7,849	0.43								
	NET SUM							**90.06**		**25,455**		**496**				**8,370**

3.9 POONKUNAM FEEDER

Table 52: Loss analysis – Poonkunam

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
	ss	Substation Feeder														
SS	2P	Post			**UG**											
G1	01, AB4	Omega Swami Saranam, ABL 50905	Distribution	LT	**UG**	98										
					UG	781	20,392	0.58	19,984	1.69	19,984	6.7	20,062	160	0.6	331
											19,984	30.8				
											19,984	40.7				
ABL4	RMU1, 28	Sarong Homes Appartment, RMU30901	C/D	LT	**UG**	98		-								
					UG	879	37,416	2.22	36,697	9.45	36,697	22.6	36,913	250	0.8	502
											36,697	148.2				
											36,697	45.7				
RMU2	31	Pallissery Appartment	Client	LT	**UG**	21										
					UG	1,074	2,190	0.01			1,913	0.1	1,913	160	0.5	276
P1	2	Classic Park	Client	LT	**OH**	25										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	683	2,639	0.01			2,379	0.6	2,379	100	0.4	260
					OH	161	2,639	0.01								
P2-1	25	Falkland Square	Client	HT	**UG**	33										
					UG	715	1,611	0.00								
					OH	221	1,611	0.00								
P3-1	21	Westend Krishna Appartment	Client	LT	**UG**	60										
					UG	777	4,343	0.03			4,041	0.2	4,041	200	0.5	302
					OH	363	4,343	0.04								
P4-1	3	Capital Harmony	Client	LT	**UG**	51										
					UG	51	2,872	0.00			2,595	0.1	2,595	160	0.5	277
					UG	683	2,872	0.01								
					OH	322	2,872	0.01								
P5-1	4	Omega Crown	Client	LT	**UG**	75										
					UG	75	5,299	0.01			4,996	0.2	4,996	200	0.5	303
					UG	683	5,299	0.03								
					OH	339	5,299	0.05								
P5	5	Ramadevi-1	Distribution	LT	**UG**	32										
					UG	714	62,937	5.10	61,816	28.72	61,816	338.4	62,155	500	1.3	782
					OH	319	62,937	6.49								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
RMU3	29	Aricaria Jyothi Nest Appartment	Client	LT	**UG**	82										
					UG	791	11,276	0.02			10,963	1.0	10,964	200	0.5	313
					OH	319	11,276	0.45								
RMU4	32	Ephatha	Client	HT	**UG**	73										
					UG	73	10,172	-								
					UG	734	10,172	0.02								
					OH	472	10,172	-								
P7	6	Lakshmi Appartment	C/D	LT	**OH**	39										
					UG	683	19,491	0.47	19,125	0.57	19,125	9.2	19,134	100	0.6	358
					OH	511	19,491	1.00								
P8-1	7	Kalyan	Client	HT	**UG**	91										
					UG	774	40,713	1.41								
					OH	516	40,713	0.33								
P9	8	Sitaram Mill	Distribution	LT	**OH**	28										
					UG	683	14,551	0.26	14,128	0.97	14,128	5.0	14,133	250	0.7	419
					OH	620	14,551	0.68								
AB6	9	Dhanalaxmi Office	Client	HT	**UG**	54										
					UG	737	81,833	9.34								
					OH	622	81,833	17.78								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
RMU5	27	Gulmohar Appartment	Client	LT	**UG**	17										
					UG	17	4,721	0.00			4,457	0.3	4,457	100	0.4	264
					UG	927	4,721	0.04								
					OH	622	4,721	0.07								
RMU6	30	Ground Water	Distribution	LT	**UG**	10										
					UG	1,071	43,392	3.63	42,794	13.76	42,794	61.4	42,855	250	0.9	537
					OH	622	43,392	6.03								
RMU7	33	SreeRam Temple	Distribution	LT	**UG**	10										
					UG	1,409	680	0.00	278	0.00	278	0.0	278	250	0.7	402
					OH	622	680	0.00								
RMU8	34	Top Tulip	Client	LT	**UG**	29										
					UG	1,476	4,199	0.05			3,920	0.5	3,920	160	0.5	278
					OH	622	4,199	0.06								
AB7	12	Ram Nikethan	Client	LT	**UG**	60										
					UG	1,445	7,087	0.13			6,680	2.0	6,682	250	0.7	405
					OH	622	7,087	0.16								
P10-1	10	Sree Sailam	Client	LT	**UG**	130										
					UG	813	10,917	0.17			10,505	1.9	10,506	250	0.7	411
					OH	742	10,917	0.46								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
RMU10	37	Sayooj Haridas	Client	LT	**UG**	33										
					UG	33	10,029	0.01			9,716	3.1	9,719	200	0.5	310
					UG	882	10,029	0.16								
					OH	697	10,029	0.36								
P11-1	22	Neelambari Appartment	Client	LT	**UG**	12										
					UG	887	9,180	0.13			8,516	0.7	8,517	400	1.1	663
					OH	802	9,180	0.35								
P11-2	11	Capital Horizon	Client	LT	**UG**	97										
					UG	972	6,208	0.07			5,924	3.1	5,927	160	0.5	281
					OH	865	6,208	0.17								
P12	26	Ramachandra Appartment	Client	LT	**OH**	3										
					UG	875	3,445	0.02			3,166	1.3	3,168	160	0.5	277
					OH	880	3,445	0.05								
RMU13	13	Pushpagiri	Distribution	LT	**UG**	7										
					UG	883	62,231	6.16	61,386	11.80	61,386	71.9	61,457	500	1.3	774
					OH	1,003	62,231	19.99								
RMU13	14	Vijay Sai	Client	LT	**UG**	104										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	104	5,218	0.01			4,916	0.3	4,916	200	0.5	302
					UG	875	5,218	0.04								
					OH	1,003	5,218	0.14								
RMU9	35	Krishna Saketh	Client	LT	**UG**	14										
					UG	1,116	2,061	0.01			1,784	0.2	1,784	160	0.5	276
					OH	1,003	2,061	0.02								
P15-1	15	Capital Garden	Client	LT	**UG**	50										
					UG	50	6,080	0.01			5,798	1.5	5,799	160	0.5	281
					UG	882	6,080	0.06								
					OH	869	6,080	0.17								
P15-2	23	Asset Mid Town Poonkunnam	Client	LT	**UG**	151										
					UG	1,033	3,762	0.03			3,483	1.7	3,484	160	0.5	278
					OH	877	3,762	0.06								
RMU11	36	SAFA Tower	C/D	LT	**UG**	79										
					UG	961	27,169	1.28	26,781	4.21	26,781	14.7	26,796	160	0.6	373
					OH	877	27,169	3.33								
RMU12	38	Dhanalakshmi Bank	Client	HT	**UG**	10										
					UG	896	13,827	0.31								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	652	13,827	0.64								
P16-1	16	Capital Village	Client	LT	**UG**	57										
					UG	1,257	14,686	0.49			13,896	36.8	13,933	630	1.3	753
					OH	718	14,686	0.80								
P16	17	Ushas	Distribution	LT	**OH**	38										
					UG	875	95,074	14.25	94,111	83.21	94,111	60.3	94,171	500	1.5	903
					OH	711	95,074	33.05								
P17	18	Palissery Tower	Client	LT	**OH**	25										
					UG	875	1,726	0.00			1,324	0.4	1,324	250	0.7	402
					OH	763	1,726	0.01								
P18-1	19	Kingsway	Client	LT	**UG**	61										
					UG	936	9,864	0.16			9,574	2.0	9,576	160	0.5	288
					OH	873	9,864	0.44								
P19	24	Vincent Tower	Client	LT	**UG**	42										
					UG	42	3,468	0.00			3,191	0.2	3,191	160	0.5	277
					UG	875	3,468	0.02								
					OH	944	3,468	0.06								
P19-1	20	Cheloor Appartment	Client	LT	**UG**	97										
					UG	97	2,856	0.00			2,577	0.1	2,578	160	0.5	279

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	875	2,856	0.01								
					OH	972	2,856	0.04								
	NET SUM							**140.05**		**154.37**		**913.9**				**14,732**

3.10 KERALAVARMA FEEDER

Table 53: Loss analysis – Keralavarma

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
SS	2P	post			**UG**	10										
ABL51003	1	Omega genting palace	Client	LT	**UG**	35										
					OH	28	4,200	0.00			3,867	0.73	3,868	200	0.55	332

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	2,225	4,200	0.08								
					UG	35	4,200	0.00								
P3-2	2	CIDBI	Client	LT	**UG**	73										
					OH	32	9,432	0.02			8,765	4.03	8,769	400	1.11	663
					UG	2,246	9,432	0.40								
					UG	73	9,432	0.02								
P3-3	3	Sreesankari	Client	LT	**UG**	52										
					OH	32	3,835	0.00			3,556	0.11	3,557	160	0.46	278
					UG	2,294	3,835	0.19			3,556	0.61				
					UG	52	3,835	0.00								
P5	RMU,38	Zudio (White field)	Client	LT	UG	25										
					OH	161	33,336	1.01			32,461	271.47	32,732	315	1.01	604
					UG	2,086	33,336	4.60								
					UG	25	33,336	0.09								
RMU TM	37	T M Tower-Transformer	Client	LT	**UG**	66										
					OH	161	13,682	0.17			13,376	4.03	13,380	160	0.50	302
					UG	2,152	13,682	0.80								
P6	RMU31 003,34	MC TOWER	C/D	LT	**UG**	50										
					OH	204	67,680	5.31	53,408	12,988	66,395	264.60	66,874	315	1.34	806
					UG	2,136	67,680	19.41			66,395	213.71				
P7-1	4	CA arcade	Client	LT	**UG**	36										
					OH	311	5,593	0.06			5,312	1.27	5,313	160	0.47	280
					UG	2,086	5,593	0.13								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	36	5,593	0.00								
ABL51004	25	falkland	Client	LT	**UG**	61										
					OH	348	16,396	0.53			15,963	10.94	15,974	250	0.70	422
					UG	2,146	16,396	1.14								
RMU31004	27	chirang Apartment	Client	LT	**UG**	59										
					OH	370	7,268	0.11			6,932	0.54	6,933	200	0.56	335
					UG	2,145	7,268	0.22								
P10-2	5	Coral Apartment	Client	LT	**UG**	19										
					OH	484	6,869	0.13			6,326	0.97	6,327	315	0.90	542
					UG	2,123	6,869	0.20								
					UG	19	6,869	0.00								
P10	P11,6	KV Bus stop	Dept	LT	**OH**	31										
					OH	501	85,095	7.20	67,066	16,902	83,968	170.90	84,139	250	1.59	956
					UG	2,086	85,095	85.57								
RMU31005	31	Palaise Grande App	Client	LT	**UG**	74										
					OH	719	5,521	0.12			5,114	0.24	5,117	250	0.67	404
					UG	2,101	5,521	0.13			5,114	3.71				
					UG	74	5,521	0.01								
P13	7	KV Hostel	Dept	LT	**OH**	132										
					OH	851	79,369	10.64	65,886	12,234	78,120	67.62	78,462	315	1.51	907
					UG	2,086	79,369	74.44			78,120	274.72				
P16-1	9	Temple Tower	Client	LT	**UG**	62										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	1,077	4,058	0.10			3,654	0.30	3,655	250	0.67	403
					UG	2,086	4,058	0.07								
					UG	62	4,058	0.00								
P19	10	Mahamaya App	Client	LT	**OH**	4										
					OH	1,238	2,464	0.04			2,204	0.67	2,205	100	0.43	259
					UG	2,086	2,464	0.03								
ABL57007	11	Sreedurga App	Client	LT	**UG**	143										
					OH	1,254	2,687	0.02			2,427	0.81	2,427	100	0.43	260
					UG	2,229	2,687	0.09								
P20-1	12	Blue Hills	Client	LT	**UG**	32										
					OH	1,318	2,096	0.03			1,837	0.07	1,837	100	0.43	259
					UG	2,124	2,096	0.02								
					UG	32	2,096	0.00								
7	RMU31006, 30	Capital Green App	Client	LT	**UG**	104										
					OH	851	17,820	1.53			17,147	1.32	17,148	400	1.12	672
					UG	2,190	17,820	1.38								
RMU31007	32	Forus	Client	LT	**UG**	30										
					OH	851	4,262	0.09			3,983	0.19	3,983	160	0.46	278
					UG	2,250	4,262	0.08								
					UG	30	4,262	0.00								
G23	ABL51009, 08	Kerala Varma	Client	LT	**UG**	442										
					OH	851	74,834	27.01			73,605	70.04	74,003	250	1.38	831

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	2,528	74,834	28.09			73,605	328.30				
G31	22	Chungam	Dept	LT	**UG**	804										
					OH	851	49,997	4.22	39,813	9,431	49,244	22.39	49,404	250	0.99	593
					UG	3,332	49,997	47.18			49,244	138.27				
P21	35	Model Road	Dept	LT	**OH**	286										
					OH	1,137	22,518	1.14	20,739	1,412	22,151	9.06	22,171	160	0.58	347
					UG	3,332	22,518	9.57			22,151	11.89				
G32	21	Central Park	Client	LT	**UG**	70										
					OH	1,137	7,023	0.32			6,685	3.34	6,689	200	0.56	335
					UG	3,402	7,023	0.33								
P26	13	NP Tower	Dept	LT	**OH**	24										
					OH	770	59,286	5.37	47,876	10,049	57,925	61.97	58,542	315	1.24	744
					UG	2,086	59,286	41.54			57,925	555.76				
P27-1	15	Capital Symphony	Client	LT	**UG**	36										
					OH	834	6,162	0.18			5,826	1.65	5,828	200	0.56	334
					UG	2,122	6,162	0.16								
P28	14	Bhadra App	Client	LT	**UG**	52										
					OH	867	4,068	0.08			3,790	-	3,790	160	0.46	278
					UG	2,086	4,068	0.07								
					UG	52	4,068	0.00								
ABL51015	24	Bindhu Theatre	Dept	LT	**UG**	112										
					OH	687	37,041	1.87	29,816	6,681	36,497	36.90	36,534	250	0.84	507
					UG	2,198	37,041	17.08								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
RMU31 008	33	Ansari Complex	Client	LT	**UG**	40										
					OH	687	16,885	1.11			16,454	7.50	16,462	250	0.71	423
					UG	2,248	16,885	1.27								
P29-1	16	Westfort Hospital	Client	HT	**UG**	33										
					OH	687	59,787	18.55								
					UG	28	59,787	0.66								
					UG	2,318	59,787	21.92								
P30	17	Haya Tower	Client	LT	**UG**	53										
					OH	760	10,251	0.45			9,585	2.67	9,588	400	1.11	664
					UG	2,338	10,251	0.49								
P32-1	29	Jyothi Tower	Client	LT	**UG**	36										
					OH	879	18,845	1.77			18,400	16.41	18,416	250	0.71	429
					UG	2,321	18,845	1.64								
P33	18	Westfort	Dept	LT	**OH**	50										
					OH	914	86,542	13.59	67,131	18,346	85,478	88.55	85,566	250	1.63	975
					UG	2,285	86,542	96.96								
RMU31 009	26	PV Arcade	Client	LT	**UG**	148										
					OH	977	9,195	0.47			8,851	5.86	8,856	200	0.56	339
					UG	2,448	9,195	0.41								
LBS	23	TipTop,	Client	LT	**UG**	10										
					OH	977	750	0.00				-	-	630	1.25	750
					UG	2,343	750	0.00								
LBS	23	TipTop,	Client	HT	**UG**	25										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	977	39,106	8.47								
					UG	2,358	39,106	7.15								
P42	19	Calvary	Department	LT	**OH**	423										
					OH	1,400	82,262	18.80	69,164	11,984	81,148	194.58	81,342	250	1.53	920
					UG	2,358	82,262	90.40								
P38	20	Westfort Tower	Client	LT	**UG**	28										
					OH	1,064	19,764	2.35			19,192	10.71	19,202	315	0.94	562
					UG	2,285	19,764	1.77								
					UG	28	19,764	0.03								
RMU31010	28	Chowallur Tower	Client	LT	**UG**	64										
					OH	1,064	9,060	0.49			8,396	0.63	8,397	400	1.10	663
					UG	2,395	9,060	0.39								
RMU31011	36	Puthenpurakal Tower	Client	LT	**UG**	72										
					OH	1,064	9,474	0.54			9,181	5.11	9,186	160	0.48	288
					UG	2,403	9,474	0.43								
			NET SUM					**690.54**		**1,00,027**		**2,865.18**				**18,943**

3.11 RAMANILAYAM FEEDER

Table 54: Loss analysis – Ramanilayam feeder

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/ transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted to consumer	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/month	kWh/ Month	kWh/ month	kWh/ month	kWh /month	kWh/month	kVA	kW	kWh /month
	S-S	Substation feeder														
S-S	P1	Post			UG	37										
P4	1	Stadium West	Dept	LT	OH	10										
					UG	62	409	0.00	7	0.00	7	0.00	7	250	0.67	402
					OH	213	409	0.00			7	0.00				
P8	2, ABL51103	Stadium East	Department	LT	OH	189										
					UG	62	49,758	0.30	39,285	9,666	48,950	167.94	49,167	250	0.99	591
					OH	391	49,758	5.49			48,950	48.68				
G1	23	Indoor Stadium	Client	HT	UG	10										
					UG	72	11,019	0.02								
					OH	391	11,019	0.36								
AB Ram	3	Ramanilayam	Dept	LT	OH	33										
					UG	254	6,055	0.02	5,635	138	5,773	0.92	5,774	150	0.47	281
					OH	570	6,055	0.12								
AB Puli	4	Pulimoottil	Client	HT	UG	38										
					UG	292	66,591	1.14								
					OH	688	66,591	7.68								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/ transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**kWh /month**
AB Chungath	11	Chungath Jewellery	Client	HT	UG	50										
					UG	50	10,864	0.03								
					UG	254	10,864	0.08								
					OH	749	10,864	0.67								
AB Kaliyath	10	Kaliyath	Client	LT	UG	53										
					UG	53	12,520	0.02			11,851	2.14	11,854	400	1.11	666
					UG	254	12,520	0.16			11,851	1.05				
					OH	749	12,520	0.67								
AB-YMCA	8	YMCA	Client	HT	UG	70										
					UG	70	5,438	0.01								
					UG	254	5,438	0.02								
					OH	764	5,438	0.17								
AB Ck	12	Chiriyan Kandath	Client	LT	UG	46										
					UG	254	22,888	0.26			22,514	19.01	22,533	200	0.59	355
					UG	46	22,888	0.10								
					OH	761	22,888	2.26								
AB-YMCA	9	Josco	Client	HT	UG	70										
					UG	70	14,563	0.08								
					UG	254	14,563	0.14								
					OH	802	14,563	1.29								
AB Kalyan	RMU3110 3, 14, 13	Kalyan Silks	Client	HT	UG	22										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/ transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**kWh /month**
					UG	22	1,19,469	1.32								
					UG	254	1,19,469	9.61								
					OH	802	1,19,469	86.50								
G4	15	Vrindhavan Appartment	Client	LT	UG	62										
					UG	62	10,830	0.01			10,414	5.26	10,419	250	0.68	411
					UG	254	10,830	0.06								
					OH	802	10,830	0.53								
P26	P13-1, 25	AB Josco, AB Kalanikethan	Department	LT	OH	52										
					UG	254	22,500	0.31	21,590	534	22,124	13.24	22,138	160	0.60	362
					OH	885	22,500	3.10								
G6	19	New Josco	Client	HT	UG	104										
					UG	104	29,116	0.38								
					UG	254	29,116	0.57								
					OH	885	29,116	5.67								
P15	P16, 16	Swapana Theatre	Dept	LT	OH	24										
					UG	254	23,383	0.25	22,356	576	22,933	10.73	22,943	250	0.73	440
					OH	981	23,383	2.80								
AB	24	Kollanur	Client	LT	UG	28										
					UG	28	15,823	0.03			15,471	41.11	15,512	160	0.52	311

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/ transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**kWh /month**
					UG	254	15,823	0.13								
					OH	1,013	15,823	1.44								
P18	21	Paremekkavu	Client	LT	OH	21										
					UG	254	18,487	0.17			18,020	39.35	18,059	250	0.71	428
					OH	1,097	18,487	2.12								
P18	17	AB Statue& Alukkas, , Statue	Department	LT	OH	37										
					UG	254	27,785	0.35	24,595	2,712	27,307	22.93	27,330	250	0.76	455
					OH	1,114	27,785	4.41								
G9	20	Paramekavu Temple	Client	LT	UG	134										
					UG	389	5,278	0.02			4,873	0.73	4,874	250	0.67	404
					OH	1,172	5,278	0.18								
G12	18	Alukkas	Department	LT	UG	109										
					UG	363	42,523	1.30	38,709	3,061	41,770	192.70	41,996	250	0.88	527
					OH	1,114	42,523	11.41			41,770	33.21				
G9	28	Paramekavu SBI	Client	HT	UG	134										
					UG	134	15,056	0.03								
					OH	472	15,056	0.27								
RMU31102	27	Bharatiyar Vidhya Kendra	Client	HT	UG	148										
					UG	148	3,590	0.00								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/ transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted to consumer	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/month	kWh/ Month	kWh/ month	kWh/ month	kWh /month	kWh/month	kVA	kW	kWh /month
					UG	254	3,590	0.00								
					OH	729	3,590	0.02								
AB SNDP	RMU3110 1, 26	SNDP	Client	LT	UG	27										
					UG	27	3,031	0.00			2,753	0.73	2,754	160	0.46	277
					UG	254	3,031	0.00								
					OH	811	3,031	0.04								
AB CL	7	Capital Legend	Client	LT	UG	25										
					UG	25	1,883	0.00			1,624	0.07	1,624	100	0.43	259
					UG	254	1,883	0.00								
					OH	943	1,883	0.02								
G15	AB ESI, 5	ESI	Dept	LT	UG	284										
					UG	284	23,342	0.62	21,753	1,128	22,881	15.19	22,902	250	0.73	440
					UG	254	23,342	0.28			22,881	6.23				
					OH	685	23,342	2.11								
AB CC	22	Capital City	Client	LT	UG	41										
					UG	326	24,172	0.77			23,589	10.02	23,599	315	0.96	573
					UG	254	24,172	0.29								
					OH	728	24,172	2.41								
AB Peri	6	Perinchery	Client	LT	UG	68										
					UG	68	31,562	0.22			30,841	21.96	30,863	400	1.16	698
					UG	284	31,562	1.14								
					UG	254	31,562	0.50								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/ transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted to consumer	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/month	kWh/ Month	kWh/ month	kWh/ month	kWh /month	kWh/month	kVA	kW	kWh /month
					OH	718	31,562	4.05								
	NET SUM							**166.58**		**17,815**		**653.22**				**7,880**

3.12 M. O ROAD FEEDER

Table 55: Loss analysis – M. O Road

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/Month	kWh/ month	kWh/month	kWh/ month	kWh/ month	kVA	kW	KWh/ month
SS																
P4	49	Exhibition	Department	LT	**UG**	15										
					UG	1,330	3,378	0.03	2,975	0	2,975	0.241	2,976	250	0.67	403

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	15	3,378	0.00								
AB1	11	Pathans	Client	LT	**UG**	74										
					UG	1,939	21,628	1.63			21,279	8	21,287	160	0.57	341
					UG	74	21,628	0.10								
RMU1	53	Ragam Theatre	Client	HT	**UG**	25										
					UG	1,939	33,181	3.85								
					UG	59	33,181	0.19								
RMU2	50	Baby Paul	Client	LT	**UG**	13										
					UG	1,939	8,723	0.27			8,435	2	8,437	160	0.48	286
					UG	61	8,723	0.02								
P5-1	17	Elite Hotel	Client	HT	**UG**	70										
					UG	1,939	34,996	4.28								
					UG	70	34,996	0.25								
					OH	19	34,996	0.12								
P6	10	Manshire	Client	HT	**UG**	11										
					UG	1,939	4,461	0.07								
					UG	11	4,461	0.00								
					OH	72	4,461	0.01								
P7-1	16	Bharath Hotel	Client	HT	**UG**	28										
					UG	1,939	34,996	4.28								
					UG	28	34,996	0.10								
					OH	104	34,996	0.66								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
RMU3	54	White Palace	Client	HT	**UG**	-										
					UG	1,939	29,029	2.94								
RMU Lavish	15	Lavish	Client	LT	**UG**	26										
					UG	2,037	660	0.00				-	-	400	1.10	660
					OH	139	660	0.00								
AB2	9	Store	Department	LT	**UG**											
					UG	1,939	79,795	22.24	78,876	58	78,876	68	78,944	250	1.42	851
					OH	139	79,795	4.54								
AB3	55	MK	Client	HT	**UG**	80										
					UG	2,019	59	0.00								
					OH	197	59	0.00								
P10-1	Tr-1	Lamex(Not marked)		LT	**OH**	35										
					UG	1,939	3,926	0.05			3,522	0.437	3,523	250	0.67	403
					OH	430	3,926	0.03								
RMU Fameel	Tr-Fameel	Fameel	Client	LT	**UG**	20										
					UG	1,959	276	0.00				-	-	160	0.46	276
					OH	433	276	0.00								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
AB4	RMU4,8	RMU-31204, Janardhanan Complex	Department	LT	**UG**	4										
					UG	1,943	51,326	9.22	50,459	19	50,459	146	50,633	315	1.15	693
					OH	388	51,326	5.25			50,459	28				
AB5	1	Corporation Office	Department	LT	**OH**	42										
					UG	1,939	57,799	11.67	56,454	9	56,454	53	57,065	315	1.22	734
					OH	496	57,799	8.52			56,454	70				
											56,454	87				
											56,454	401				
P12	2	BSNL CTD 1	Client	HT	**UG**	42										
					UG	1,981	4,902	0.09								
					OH	451	4,902	0.06								
P12	3	BSNL CTD 2	Client	HT	**UG**	42										
					UG	1,981	36,813	4.84								
					OH	451	36,813	3.14								
P12-1	4	BSNL Pattalam Exchange	Client	HT	**UG**	57										
					UG	2,082	31,249	3.66								
					UG	57	31,249	0.31								
					OH	451	31,249	2.26								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
P12-1	5	BSNL Pattalam Exchange	Client	HT	**UG**	57										
					UG	2,082	-	-								
					UG	57	-	-								
					OH	451	-	-								
P12-1	6	BSNL Pattalam Exchange	Client	HT	**UG**	57										
					UG	2,082	-	-								
					UG	57	-	-								
					OH	451	-	-								
RMU5	52	Jai Hind Market	Department	LT	**UG**	228										
					UG	2,167	59,839	13.98	59,018	12	59,029	61	59,091	315	1.25	748
					OH	454	59,839	8.37								
AB6	13	CP Tower	Client	LT	**UG**	68										
					UG	2,007	858	0.00			318	0.003	318	315	0.90	540
					OH	358	858	0.00								
P14	20	Jonsons	Client	LT	**UG**	77										
					UG	1,999	3,449	0.04			3,170	1	3,172	160	0.46	277
					OH	403	3,449	0.02								
RMU6	46	Mathrubhumi	Client	HT	**UG**	242										
					UG	2,242		-								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	358	-	-								
P15	21	Manappuram Hotel	Client	HT	**UG**	36										
					UG	2,286	11,221	0.52								
					OH	358	11,221	0.23								
	22	Manappuram Hotel	Client	LT	**UG**	5										
					UG	2,291	21,720	1.95			21,301	27	21,328	100	0.65	392
					OH	358	21,720	0.87								
P16-1	29	Kuriland	Client	LT	**UG**	15										
					UG	2,255	3,936	0.06			3,674	0.32	3,675	100	0.44	262
					UG	15	3,936	0.00								
					OH	379	3,936	0.03								
RMU7	45	Vattekkat Arcade	Client	LT	**UG**	80										
					UG	2,335	11,131	0.52			10,910	2	10,913	63	0.36	218
					OH	373	11,131	0.24								
P17	14	Jose Alukas	Client	HT	**UG**	51										
					UG	2,311	27,666	3.19								
					OH	397	27,666	1.56								
P17	31	New Manshire	Client	HT	**UG**	75										
					UG	2,280	15,267	0.96								
					OH	397	15,267	0.48								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	kWh/ Month	kWh/ month	kWh/Month	kWh/ month	kWh/month	kWh/ month	kWh/ month	kVA	kW	KWh/ month
RMU8	43	Sapphire	Client	HT	**UG**	213										
					UG	2,463	22,667	2.28								
					OH	455	22,667	1.20								
RMU9	47	TCR Fashion	Client	HT	**UG**											
					UG	2,463	838	0.00								
					UG	50	838	0.00								
					OH	455	838	0.00								
G18	26	Alukkas Seafort	Client	HT	**UG**	87										
					UG	2,303	15,215	0.96								
					OH	455	15,215	0.54								
P19	25	Ammus Regency	Client	HT	**UG**	30										
					UG	2,216	15,387	0.95								
					UG	30	15,387	0.02								
					OH	500	15,387	0.61								
P20-1	23	Lafame	Dept	LT	**OH**	32										
					UG	2,216	43,700	7.62	43,022	14	43,036	25	43,142	250	0.93	557
					OH	537	43,700	5.28			43,036	82				
P20-2	24	Omega Paradise	Client	LT	**UG**	30										
					UG	2,216	3,785	0.06			3,484	0.17	3,484	200	0.50	301
					UG	30	3,785	0.00								
					OH	546	3,785	0.04								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
AB8	30	Kovilakam	Client	LT	**UG**	37										
					UG	2,216	5,527	0.12			5,122	1	5,123	250	0.67	404
					UG	37	5,527	0.00								
					OH	581	5,527	0.09								
G19	27	Sagara Apartment	Client	LT	**UG**	65										
					UG	2,281	2,744	0.03			2,484	0.14	2,484	100	0.43	260
					OH	677	2,744	0.03								
P22	51	Pearl Dept.	Dept	LT	**OH**	43										
					UG	2,216	41,113	6.75	40,323	6	40,329	82	40,411	100	1.17	702
					OH	662	41,113	5.75								
P22-1	28	Pearl Regency	Client	HT	**UG**	31										
					UG	2,216	22,866	2.09								
					UG	31	22,866	0.04								
					OH	668	22,866	1.80								
G24	AB9, 32	ABL-51212, Kuruppam Road 1	Department	LT	**UG**	44										
					UG	2,619	68,119	21.89	67,265	16	67,281	38	67,319	500	1.33	800
					OH	358	68,119	8.54								
G24	AB9, 33	ABL-51212, Kuruppam Road 2	Department	LT	**UG**	44										
					UG	2,368	41,857	7.47	40,984	8	40,992	141	41,133	500	1.21	724

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					OH	358	41,857	3.22								
AB9	7	Jaya Palace	Client	LT	**UG**	15										
					UG	2,619	4,179	0.08			3,900	0.17	3,901	160	0.46	278
					UG	15	4,179	0.00			3,900	1				
					OH	358	4,179	0.03								
G23	34	Enark Appartment	Client	LT	**UG**	54										
					UG	2,629	12,391	0.73			11,836	7	11,843	315	0.91	548
					OH	358	12,391	0.28								
G25	19	Luciya Palace	Client	HT	**UG**	108										
					UG	2,726	28,795	4.07								
					OH	409	28,795	1.74								
P24	35	Nest Shopping	Client	LT	**UG**	25										
					UG	2,619	6,885	0.22			6,602	1	6,603	160	0.47	282
					UG	25	6,885	0.00								
					OH	424	6,885	0.10								
P25	36	Trade Centre1	Client	HT	**UG**	27										
					UG	2,619	8,246	0.32								
					UG	27	8,246	0.00								
					OH	367	8,246	0.13								
P25	37	Trade Centre 2	Client	LT	**UG**	27										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	2,368	18,668	1.49			18,079	29	18,108	315	0.93	560
					UG	27	18,668	0.02								
					OH	367	18,668	0.66								
P26	38	Grand Park Hotel1	Client	HT	**UG**	30										
					UG	2,718	9,329	0.43								
					UG	30	9,329	0.01								
					OH	367	9,329	0.16								
P26	39	Grand Park Hotel 2	Client	HT	**UG**	30										
					UG	2,467	2,700	0.03								
					UG	30	2,700	0.00								
					OH	367	2,700	0.01								
RMU10	42	Hotel Garuda	Client	HT	**UG**	29										
					UG	2,737	49,883	12.27								
					UG	29	49,883	0.16								
					OH	367	49,883	4.69								
P29	RMU11, 44	RMU31206, TSR Dist. Cop. Bank	Client	HT	**UG**	30										
					UG	2,748	7,377	0.27								
					OH	401	7,377	0.11								
P31	RMU12, 6	Fridge Hosue	Client	HT	**UG**	30										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh/ month**
					UG	2,748	13,433	0.89								
					OH	486	13,433	0.45								
P33	40	Pooram Residency1	Client	HT	**UG**	30										
					UG	2,718	1,554	0.01								
					UG	30	1,554	0.00								
					OH	560	1,554	0.01								
P33	41	Pooram Residency 2	Client	LT	**UG**	30										
					UG	2,467	2,111	0.02			1,834	0.04	1,834	160	0.46	276
					UG	30	2,111	0.00								
					OH	571	2,111	0.01								
G30	12	Pathayyapura	Client	LT	**UG**	141										
					UG	1,939	10,918	0.42			10,237	16	10,253	400	1.11	664
					UG	141	10,918	0.09								
RMU MT	59 (C)	Mar Tower	Client	LT	**UG**	60										
					UG	2,078	540	0.001				-	-	315	0.90	540
					UG	60	540	0.0001								
					OH	139	540	0.0002								
	NET SUM							**235.03**		**141**		**1,377**				**13,442**

3.13 KOTTAPURAM FEEDER

Table 56: Loss analysis – Kottapuram

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
	S-S	Substation feeder														
SS	2P	Post			**UG**	16										
2P	G1	Ground			**UG**	-										
AB Arikkariya	1	Arikkariya	Client	LT	**UG**	37										
					UG	1,056	5,552	0.06			5,145	3.8	5,148	250	0.67	404
					OH	86	5,552	0.01								
ABL51306	2	Rama Devi	Department	LT	**OH**	70										
					UG	1,018	1,09,285	23.63	74,035	33,786	1,07,821	168.2	1,07,989	250	2.16	1,296
					OH	270	1,09,285	17.88								
AB Mookambika	3	Mookambika	Client	LT	**UG**	43										
					UG	43	3,332	0.00			3,071	0.1	3,071	100	0.43	261
					UG	1,018	3,332	0.02								
					OH	334	3,332	0.02								
RMU31301	57	Tangerine	Client	LT	**UG**	53										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	1,071	3,989	0.03			3,711	0.2	3,711	160	0.46	278
					OH	328	3,989	0.03								
P3	4	Rama Devi 3	Department	LT	**OH**	13										
					UG	1,018	1,99,898	79.05	81,484	1,14,429	1,95,913	1,180.1	1,97,093	315	4.68	2,806
					OH	329	1,99,898	72.92								
P5	15	Vigneshwara	Client	LT	**UG**	114										
					UG	1,132	4,018	0.04			3,613	1.8	3,615	250	0.67	403
					OH	397	4,018	0.04								
RMU31302	52	Maithree Appartment	Client	LT	**UG**	25										
					UG	25	9,841	0.01			9,431	1.3	9,432	250	0.68	409
					UG	1,160	9,841	0.22								
					OH	397	9,841	0.21								
RMU31303	64	MRG Sabari	Client	LT	**UG**	47										
					UG	1,206	10,697	0.27			10,149	1.5	10,151	315	0.91	546
					OH	397	10,697	0.25								
ABL51308	42	LBS, TR-Sundaram	Client	LT	**UG**	12										
					UG	1,030	276	0.00				-	-	160	0.46	276
					OH	481	276	0.00								
AB Kayson	53	Kayson Apartmemnt	Client	LT	**UG**	31										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	31	8,438	0.01			7,894	0.9	7,895	315	0.91	544
					UG	1,018	8,438	0.14								
					OH	490	8,438	0.19								
RMU31 305	50	Samruthi Apartment	Client	LT	**UG**	37										
					UG	37	2,619	0.00			2,359	0.2	2,359	100	0.43	260
					UG	1,072	2,619	0.01								
					OH	481	2,619	0.02								
RMU31 306	51	Sree Ram Apartment	Client	LT	**UG**	39										
					UG	1,181	2,080	0.01			1,803	0.0	1,803	160	0.46	276
					OH	481	2,080	0.01								
RMU31 307	56	Indivar	Client	LT	**UG**	119										
					UG	1,261	3,975	0.04			3,673	0.6	3,673	200	0.50	301
					OH	481	3,975	0.04								
P8	19	Vykundam	Client	LT	**UG**	9										
					UG	1,027	6,684	0.09			6,400	1.7	6,402	160	0.47	282
					OH	440	6,684	0.11								
RMU31 304	66	Kalyan Heritage	Client	LT	**UG**	69										
					UG	1,087	15,815	0.53			15,033	27.9	15,061	630	1.26	754
					OH	440	15,815	0.61								
AB Omega	6	Omega royal	Client	LT	**UG**	33										
					UG	1,051	4,266	0.04			3,859	3.5	3,862	250	0.67	403

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	257	4,266	0.03								
P10	7	Prarthana	C/D	LT	**OH**	42										
					UG	1,018	61,543	7.49	43,570	16,894	60,463	59.5	60,857	250	1.14	686
					OH	284	61,543	5.96			60,463	334.7				
RMU31 308	44	IRA Appartment	Client	LT	**UG**	61										
					UG	1,080	1,891	0.01			1,633	0.1	1,633	100	0.43	259
					OH	368	1,891	0.01								
P15	18	Aldebaren	Client	LT	**UG**	37										
					UG	1,055	10,782	0.24			10,465	4.8	10,470	200	0.52	312
					OH	468	10,782	0.30								
AB Athira	17	Athira Abode	Client	LT	**UG**	49										
					UG	1,067	5,571	0.06			5,029	0.6	5,029	315	0.90	541
					OH	480	5,571	0.08								
P16	21	Cheloor Citadel	Client	LT	**UG**	88										
					UG	1,106	14,877	0.48			14,455	3.7	14,459	250	0.70	418
					OH	517	14,877	0.63								
RMU TBPL	41	TBPL Arcade	Client	LT	**UG**	52										
					UG	1,070	402	0.00				-	-	250	0.67	402
					OH	958	402	0.00								
RMU31 309	68	Top Crystal Appartment	Client	LT	**UG**	20										
					UG	20	4,584	0.00			4,306	0.1	4,306	160	0.46	279

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	1,030	4,584	0.04								
					OH	888	4,584	0.10								
P18	8	Kottappuram Vyduthi Bhavan	Department	LT	**OH**	136										
					UG	624	1,60,598	31.25	73,942	83,615	1,57,557	718.3	1,58,275	250	3.87	2,323
					OH	1,024	1,60,598	146.48								
AB Sreesakthi	14	Sreesakthi	Client	LT	**UG**	49										
					UG	1,067	4,287	0.04			4,008	0.1	4,008	160	0.46	278
					OH	1,024	4,287	0.10								
G13	9	Ragamalikapuram	C/D	LT	**UG**	319										
					UG	1,337	32,658	2.77	27,282	4,756	32,038	9.3	32,177	250	0.80	481
					OH	1,015	32,658	6.00			32,038	30.1				
											32,038	129.5				
AB Zodiac	13	Zodiac	Client	LT	**UG**	34										
					UG	34	3,992	0.00			3,714	0.3	3,714	160	0.46	278
					UG	1,018	3,992	0.03								
					OH	1,093	3,992	0.10								
AB Vintage	10	Cheloor Vintage	Client	LT	**UG**	33										
					UG	33	5,537	0.00			5,234	0.7	5,234	200	0.50	303

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	1,018	5,537	0.06								
					OH	1,136	5,537	0.19								
AB Heights	20	Cheloor Heights	Client	LT	**UG**	67										
					UG	67	11,256	0.03			10,573	2.3	10,575	500	1.13	681
					UG	1,018	11,256	0.25								
					OH	1,136	11,256	0.80								
RMU31 310	55	Vaigai	Client	LT	**UG**	80										
					UG	80	13,665	0.05			12,996	2.2	12,998	400	1.11	667
					UG	1,018	13,665	0.37								
					OH	1,260	13,665	1.31								
P21	48	Swetha	Client	LT	**UG**	126										
					UG	126	11,458	0.05			10,900	9.9	10,911	315	0.91	547
					UG	1,018	11,458	0.26			10,900	1.3				
					OH	1,256	11,458	0.91								
AB Achuthan	49	Achutan	Client	LT	**UG**	30										
					UG	1,048	3,866	0.03			3,588	0.2	3,588	160	0.46	278
					OH	1,179	3,866	0.10								
RMU31 311	65	Civanta Apartment	Client	LT	**UG**	70										
					UG	1,088	5,429	0.06			5,125	1.9	5,127	200	0.50	303
					OH	1,202	5,429	0.20								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
RMU31 312	60	SivaPuri	Client	LT	**UG**	217										
					UG	1,236	3,417	0.03			3,139	0.1	3,139	160	0.46	277
					OH	1,253	3,417	0.08								
AB Pankaj	16	Pankaj	Client	LT	**UG**	16										
					UG	1,034	7,897	0.13			7,489	1.9	7,491	250	0.68	406
					OH	1,320	7,897	0.46								
P26	AB Velan, 11	Vellan	Department	LT	**OH**	131										
					UG	1,018	1,33,278	35.14	66,192	64,275	1,30,466	153.9	1,31,549	250	2.88	1,729
					OH	1,438	1,33,278	141.75			1,30,466	929.3				
AB Love Dale	12	Love Dale	Client	LT	**UG**	22										
					UG	22	8,173	0.00			7,765	1.4	7,766	250	0.68	407
					UG	1,018	8,173	0.13								
					OH	1,457	8,173	0.54								
RMU31 313	63	Nandana Plaza	Client	LT	**UG**	90										
					UG	1,109	3,073	0.02			2,772	0.3	2,772	200	0.50	301
					OH	1,438	3,073	0.08								
			SUM					**581.80**		**3,17,754**		**3,788.4**				**23,063**

3.14 CHEMBUKAVU FEEDER

Table 57: Loss analysis - Chembukavu

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/ Month	kWh/ month	kWh/ month	kWh/ month	kWh/ month	kVA	kW	KWh / month
	S-S	Substation														
S-S	P1	Post			UG	30										
AB bb	1	Big Bazar	Client	HT	UG	53										
					UG	165	1,05,246	4.83								
					OH	9	1,05,246	0.78								
RMU Triumph	RMU31 401, 2	Jawahar	Dept	LT	UG	85										
					UG	415	61,485	3.11	58,368	2,134	60,502	237	60,793	250	1.15	691
					OH	-	61,485	-			60,502	55				
G31	31	Asset Galleria	Client	LT	UG	104										
					UG	478										
					OH	-										
G7	11	Swathy Residency	Client	LT	UG	84										
					UG	84	6,052	0.01								
					UG	374	6,052	0.03			5,646	2	5,647	250	0.67	404
					OH	-	6,052	-								
AB KSFE	15	KSFE	Client	HT	UG	27										
					UG	27	13,776	0.02								
					UG	797	13,776	0.40								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh / month**
					OH	111	13,776	0.16								
AB CH	10	Central Hotel	Client	HT	UG	54										
					UG	54	11,274	0.02								
					UG	797	11,274	0.27								
					OH	245	11,274	0.24								
RMU31402	13	Agro	C/D	LT	UG	145										
					UG	942	48,849	4.46	39,772	8,322	48,094	171	48,265	250	0.97	584
					OH	182	48,849	2.46								
G15	4, 5	Exchange 1& 2	Client	HT	UG	244										
					UG	244	83,951	5.61								
					UG	797	83,951	14.86								
					OH	411	83,951	21.86								
P10	9	Museum	Dept	LT	OH	19										
					UG	797	1,00,641	16.02	63,421	35,268	98,689	719	99,511	315	1.88	1,130
					OH	429	1,00,641	24.65			98,689	102				
G21	G22, 3	Co-operative Road	Dept	LT	UG	209										
					UG	1,006	36,896	2.72	30,757	5,628	36,385	44	36,429	160	0.78	467
					OH	714	36,896	5.51								
P11	P12, 14	Mana Line	Dept	LT	OH	117										
					UG	797	28,785	1.31	26,408	1,965	28,373	19	28,392	160	0.65	392
					OH	831	28,785	3.90								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh / month**
G24	6	Sougandhika	Client	LT	UG	54										
					UG	856	1,131	0.00			873	0	873	100	0.43	258
					OH	847	1,131	0.01								
AB Ni	12	Navani Holy View	Client	LT	UG	36										
					UG	36	4,171	0.00								
					UG	797	4,171	0.03			3,765	3	3,768	250	0.67	403
					OH	1,026	4,171	0.10								
AB KMP	30	KMP Swapnapuri	Client	LT	UG	35										
					UG	35	4,249	0.00								
					UG	797	4,249	0.03			3,970	1	3,970	160	0.46	278
					OH	1,120	4,249	0.11								
AB Caza	7	Cheloor Cazeblanka	Client	LT	UG	44										
					UG	44	4,050	0.00								
					UG	797	4,050	0.03			3,772	0	3,772	160	0.46	278
					OH	882	4,050	0.08								
P17	P18, 8	Southern	Dept	LT	OH	69										
					UG	797	26,193	1.08	22,567	3,158	25,725	15	25,739	250	0.76	454
					OH	935	26,193	3.63								
RMU31403	16	(Atreya)	Client	HT	UG	61										
					UG	858	87,864	17.52								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh / month**
					OH	1,181	87,864	68.85								
AB BP	28	RMU 31404, Bishop Palace	Client	HT	UG	27										
					UG	826	16,354	0.58								
					OH	1,316	16,354	2.66								
ABL51406	AB BP, 17	Bishop Palace	Dept	LT	OH	151										
					UG	797	70,399	7.84	64,226	5,167	69,393	178	69,570	315	1.38	828
					OH	1,467	70,399	41.20								
P20	18	Kings fort	Client	LT	OH	14										
					UG	797	6,751	0.07			6,342	4	6,346	250	0.68	405
					OH	1,514	6,751	0.39								
					OH	14	6,751	0.00								
AB Sky Line	23	Skyline Garland	Client	LT	UG	64										
					UG	861	16,007	0.44			15,373	10	15,382	500	1.04	624
					OH	1,852	16,007	2.69								
P24	AB SV, 20	Soda varky	Dept	LT	OH	43										
					UG	797	78,965	9.86	64,769	13,137	77,906	179	78,086	250	1.47	879
					OH	1,895	78,965	66.93								
P25	21	Sarayu Apartment	Dept	LT	OH	44										
					UG	797	46,684	3.45	40,642	5,173	45,814	47	46,115	250	0.95	569

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kVA**	**kW**	**KWh / month**
					OH	1,971	46,684	24.33			45,814	254				
G26	24	Kollanur Oriental	Client	LT	UG	81										
					UG	878	7,076	0.09			6,770	1	6,771	200	0.51	305
					OH	2,103	7,076	0.60								
P31	ABI50409, 22	Sastha Temple	Dept	LT	OH	34										
					UG	797	50,882	4.09	46,206	4,011	50,217	47	50,282	250	1.00	600
					OH	2,264	50,882	33.21			50,217	19				
AB CTR	19	Cheloor Tudoor Rose	Client	LT	UG	27										
AB Gayathri	26	Gayathri Apartment	Client	LT	UG	27										
					UG	824	5,935	0.06			5,530	1	5,530	250	0.67	404
					OH	1,835	5,935	0.37								
P36	25	Keeramkulangara	Dept	LT	OH	66										
					UG	797	48,890	3.78	44,454	3,713	48,167	21	48,278	160	1.02	612
					OH	1,895	48,890	25.66			48,167	90				
G27	27	Sreyas Apartment	Client	LT	UG	58										
					UG	855	6,482	0.07			6,077	1	6,077	250	0.67	405
					OH	1,751	6,482	0.42								
RMU31405	29	Forus Apartment	Client	LT	UG	330										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/ Month	kWh/ month	kWh/ month	kWh/ month	kWh/ month	kVA	kW	KWh / month
					UG	1,162	3,688	0.03			3,387	0	3,387	200	0.50	301
					OH	1,748	3,688	0.13								
	NET SUM							**433.93**		**87,676**		**2,219**				**12,094**

3.15 SHORNUR ROAD FEEDER

Table 58: Loss analysis – Shornur road feeder

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted to consumer	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/Month	kWh/ month	kWh/ Month	kWh/month	kWh/ month	kWh/ month	kWh/month	kVA	kW	kWh/ month
ss		Substation														
SS	2P	Post			UG	-										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/Month**	**kWh/month**	**kWh/Month**	**kWh/month**	**kWh/month**	**kWh/month**	**kWh/month**	**kVA**	**kW**	**kWh/month**
ABL51502	RMU31501, 35-	RMU31501, Bismi	Client	HT	UG	29										
					UG	155	35,818	0.478								
RMU31501	36	Bismi	Client	LT	UG	47										
					UG	202	660	0.000				-	-	400	1.10	660
G3	RMU31502, 45-	Pranavam Appartment	C/D	LT	UG	111										
					UG	266	28,087	0.408	26,331	1,143	27,474	153.2	27,627	250	0.77	461
RMU31503	46	Top Orchid Appartment	Client	LT	UG	116										
					UG	116	7,957	0.024			7,672	0.9	7,673	160	0.47	284
					UG	266	7,957	0.033								
G9	1	Sree Hari Appartments	Client	LT	UG	139										
					UG	264	1,644	0.001			1,386	0.02	1,386	100	0.43	259
					OH	36	1,644	0.001			1,386	0.3				
AB-Sree	2	Sreelakshmi Silks	Client	LT	UG	53										
					UG	53	12,120	0.031			11,777	28.1	11,805	200	0.53	315
					UG	126	12,120	0.037								
					OH	76	12,120	0.063								
G6	03	Daffodils	Client	LT	UG	53										
					UG	53	3,433	0.003			3,155	0.1	3,155	160	0.46	277

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/Month**	**kWh/month**	**kWh/Month**	**kWh/month**	**kWh/month**	**kWh/month**	**kWh/month**	**kVA**	**kW**	**kWh/month**
					UG	126	3,433	0.003								
					OH	149	3,433	0.010								
AB-Rukmani2	26	Rukmani Temple Park	Client	LT	UG	48										
					UG	48	4,502	0.004			4,200	0.1	4,200	200	0.50	302
					UG	263	4,502	0.011								
					OH	144	4,502	0.017								
AB-Rukmai1	P5,4	Post, Karthayani	Dept	LT	OH	43										
					UG	126	58,879	0.847	54,801	3,301	58,101	116.0	58,217	250	1.10	662
					OH	187	58,879	3.596								
P5	AB, 23-	K.R Bakery	Dept	LT	OH	17										
					UG	15										
					UG	141	43,702	0.522	39,548	2,272	41,819	25.3	42,975	500	1.21	727
					OH	204	43,702	2.156			41,819	62.6				
											41,819	1,067.5				
G12	5	Pazhoor Arcades	Client	LT	UG	65										
					UG	65	6,281	0.010			6,006	4.4	6,012	100	0.45	269
					UG	126	6,281	0.010			6,006	1.6				
					OH	187	6,281	0.042								
G13	21-	Saraswathy	Client	LT	UG	50										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted to consumer	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/Month	kWh/month	kWh/Month	kWh/month	kWh/month	kWh/month	kWh/month	kVA	kW	kWh/month
					UG	176	3,671	0.005			3,259	1.0	3,268	250	0.67	403
					OH	316	3,671	0.024			3,259	0.1				
											3,259	8.0				
P9	22	Unique Ardent	Dept	LT	UG	28										
					UG	29	29,129	0.096	27,031	1,348	28,379	11.7	28,664	250	0.77	465
					UG	126	29,129	0.207			28,379	12.0				
					OH	442	29,129	2.079			28,379	261.3				
RMU31504	49	Panikath Mall	Client	LT	UG	47										
					UG	47	27,319	0.111			26,726	10.7	26,736	315	0.97	583
					UG	136	27,319	0.197								
					OH	314	27,319	1.301								
P40	P41, 18	Post/Varnam	Dept	LT	OH	172										
					UG	126	73,796	1.331	64,629	8,198	72,826	95.9	72,946	315	1.42	850
					OH	486	73,796	14.684			72,826	23.4				
P42	19	Omega Panthlon	Client	LT	UG	43										
					UG	43	3,610	0.002			3,309	0.2	3,309	200	0.50	301
					UG	126	3,610	0.003								
					OH	500	3,610	0.036								
RMU31505	43	Prasad Arcade	Client	LT	UG	30										
					UG	159	9,820	0.030			9,402	0.7	9,411	250	0.68	409
					OH	521	9,820	0.279			9,402	8.6				

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/Month**	**kWh/month**	**kWh/Month**	**kWh/month**	**kWh/month**	**kWh/month**	**kWh/month**	**kVA**	**kW**	**kWh/month**
RMU31506	48	CKM Heights	Client	LT	UG	85										
					UG	215	2,938	0.004			2,678	0.2	2,678	100	0.43	260
					OH	521	2,938	0.025								
G50	20	Nandhanam	Client	LT	UG	312										
					UG	438	2,697	0.006			2,419	0.6	2,420	160	0.46	277
					OH	585	2,697	0.024			2,419	0.0				
P38	6	Kasturi (Bhramasam Madam)	Client	LT	OH	46										
					UG	312	3,608	0.008			3,346	0.9	3,346	100	0.44	261
					OH	268	3,608	0.019								
G17	7	Sreepriya	Client	LT	UG	110										
					UG	422	3,388	0.009			3,086	1.6	3,087	200	0.50	301
					OH	222	3,388	0.014								
RMU31507	42	Thrissur Service Coperative Bank	Client	HT	UG	32										
					UG	32	4,500	0.003								
					UG	333	4,500	0.016								
					OH	277	4,500	0.038								
AB-Krishna	51	Capital Krishna	Client	LT	UG	34										
					UG	34	2,833	0.001			2,556	0.1	2,556	160	0.46	277
					UG	312	2,833	0.005								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/Month**	**kWh/month**	**kWh/Month**	**kWh/month**	**kWh/month**	**kWh/month**	**kWh/month**	**kVA**	**kW**	**kWh/month**
					OH	302	2,833	0.014								
P16	9	Forus Mathura	Client	LT	OH	3										
					UG	312	2,809	0.005			2,532	0.6	2,532	160	0.46	277
					OH	385	2,809	0.017								
AB-MRG	40	MRG Sree Valstam	Client	LT	UG	25										
					UG	25	8,119	0.006			7,711	1.9	7,713	250	0.68	406
					UG	480	8,119	0.058								
					OH	383	8,119	0.132								
AB-AR	27	A R Tower	Client	LT	UG	20										
					UG	20	5,573	0.002			5,307	0.6	5,308	100	0.44	266
					UG	312	5,573	0.018								
					OH	408	5,573	0.066								
P18	8	Krishna(Thiruvambadi-2)	Department	LT	OH	9										
					UG	312	42,449	1.028	39,169	2,710	41,879	29.8	41,921	250	0.88	529
					OH	429	42,449	4.037			41,879	11.7				
											41,879	18.1				
P19	28	Friends Mall	Client	LT	OH	12										
					UG	312	3,114	0.006			2,711	1.0	2,712	250	0.67	403
					OH	470	3,114	0.024								
RMU31508	47	Oushadhi Panchakarma	Client	HT	UG	81										
					UG	393	10,871	0.111								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted to consumer	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/Month	kWh/month	kWh/Month	kWh/month	kWh/month	kWh/month	kWh/month	kVA	kW	kWh/month
					OH	481	10,871	0.390								
P22	P23, 11	Oushadhi	Department	LT	OH	32										
					UG	312	61,885	2.372	56,269	4,598	60,868	116.3	61,122	315	1.27	763
					OH	635	61,885	13.778			60,868	138.6				
G22	41	Top Tower	Client	LT	UG	146										
					UG	475	4,692	0.019			4,389	0.5	4,390	200	0.50	302
					OH	635	4,692	0.073								
RMU31510	44	Kalyan Hypermarket	Client	HT	UG	403										
					UG	1,055	88,321	19.773								
					OH	635	88,321	33.974								
P24	10	Thiruvambadi(Lekshmi)	Department	LT	OH	1										
					UG	654	59,863	4.650	52,090	6,923	59,014	173.7	59,187	250	1.13	676
					OH	636	59,863	12.922								
G28	24	Narayani	Client	LT	UG	101										
					UG	755	2,750	0.011			2,473	0.1	2,473	160	0.46	277
					OH	635	2,750	0.027								
P25	34	K.A Kumaran	Department	LT	OH	10										
					UG	312	17,826	0.197	17,133	230	17,363	27.6	17,400	250	0.71	426
					OH	676	17,826	1.217			17,363	9.5				
AB-Saroja	25	Saroja	Client	HT	UG	89										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted to consumer	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/Month	kWh/month	kWh/Month	kWh/month	kWh/month	kWh/month	kWh/month	kVA	kW	kWh/month
					UG	401	23,263	0.522								
					OH	818	23,263	3.037								
P30	12	Suharsha	Client	LT	UG	26										
					UG	26	26,816	0.075			26,098	30.7	26,129	400	1.15	688
					UG	358	26,816	0.511								
					OH	990	26,816	4.034								
RMU31511	50	Coperative Hospital	Client	HT	UG	40										
					UG	485	37,060	1.601								
					OH	990	37,060	9.326								
AB-Coperative	13	Coperative Hospital	Department	LT	OH	2										
					UG	461	57,087	2.980	52,283	3,970	56,253	71.2	56,324	500	1.27	764
					OH	992	57,087	18.311								
AB-Athulya	16	Athulya Chundari	Client	LT	UG	33										
					UG	596	5,287	0.033			5,006	0.6	5,007	160	0.47	280
					OH	1,018	5,287	0.161								
G39	LBS	LBS			UG	166										
LBS	14	City Centre 1	Client	LT	UG	3										
					UG	3	45,955	0.023					45,152	800	1.34	804
					UG	729	45,955	3.054								
					OH	1,035	45,955	12.382								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted to consumer	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/Month	kWh/month	kWh/Month	kWh/month	kWh/month	kWh/month	kWh/month	kVA	kW	kWh/month
LBS	15	City Centre 2	Client	LT	UG	12										
					UG	12	4,255	0.001			3,977	0.4	3,977	160	0.46	278
					UG	729	4,255	0.026								
					OH	1,035	4,255	0.106								
G41	39	Alukkas Nest	Client	LT	UG	159										
					UG	722	8,147	0.095			7,810	1.5	7,811	215	0.56	336
					OH	1,045	8,147	0.393								
ABL51506	33	Malabar Eye Clinic	Department	LT	OH	35										
					UG	563	46,763	2.248	43,580	2,162	45,742	8.7	46,207	250	0.93	556
					OH	1,080	46,763	12.320			45,742	42.7				
											45,742	413.6				
AB-Shivam	17	Shivam	Client	LT	UG	42										
					UG	822	6,000	0.059			5,595	0.2	5,595	250	0.67	404
					OH	1,045	6,000	0.213								
P35	29	Ramdas Theatre	Client	HT	UG	36										
					UG	846	21,964	0.980								
					OH	1,098	21,964	3.632								
AB-Pen	30	Peninsula	Client	HT	UG	129										
					UG	129	25,616	0.412								
					UG	810	25,616	1.276								
					OH	1,101	25,616	4.955								
P36-1	31	Wintage Royal	Client	LT	UG	63										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted to consumer**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/Month**	**kWh/month**	**kWh/Month**	**kWh/month**	**kWh/month**	**kWh/month**	**kWh/month**	**kVA**	**kW**	**kWh/month**
					UG	63	7,696	0.015			7,389	0.7	7,390	200	0.51	306
					UG	810	7,696	0.095								
					OH	1,081	7,696	0.363								
P37	37	Top Heritage	Client	LT	UG	40										
					UG	40	2,351	0.001			2,074	0.1	2,074	160	0.46	277
					UG	810	2,351	0.009								
					OH	1,126	2,351	0.035								
P37-1	38	Forus Cosynest	Client	LT	UG	36										
					UG	36	3,033	0.001			2,756	0.2	2,756	160	0.46	277
					UG	810	3,033	0.015								
					OH	1,136	3,033	0.059								
		NET SUM						207		36,855		2,998				17,895

3.16 DISTRICT HOSPITAL FEEDER

Table 59: Loss analysis – DH

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
ss		Substation														
ss	P1	Post			**UG**	32										
ABL51602	37	KWA	Department	LT	**UG**	15										
					UG	1,165	54,345	6.20	53,394	11.6	53,406	190.4	53,596	500	1.25	749
					OH	-	54,345	-								
RMU31601	36	Vyapari Vyavasai	Client	LT	**UG**	33										
					UG	33	5,254	0.00			4,849	0.4	4,850	250	0.67	404
					UG	1,179	5,254	0.06								
					OH	123	5,254	0.02								
G12	31	Good Will	Client	HT	**UG**	71										
					UG	1,221	16,115	0.57								
					OH	123	16,115	0.16								
AB Cheloor	1	Cheloor Golden Enclave	Client	LT	**UG**	71										
					UG	71	5,430	0.01			5,026	0.9	5,026	250	0.67	404
					UG	1,150	5,430	0.06								
					OH	275	5,430	0.04								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
AB Cheloor	AB Fortune , 02	Classic Fortune	Department	LT	**OH**	62										
					UG	1,150	9,804	0.20	9,503	0.2	9,503	1.4	9,521	100	0.47	284
					OH	337	9,804	0.17			9,503	3.1				
											9,503	12.8				
RMU Az	43	Forus Azalia	Client	LT	**UG**	33										
					UG	1,203	300	0.00				-	-	200	0.50	300
					OH	353	300	0.00								
G16	3	Menachery	Client	LT	**UG**	51										
					UG	1,200	3,017	0.02			2,740	0.4	2,740	160	0.46	277
					OH	319	3,017	0.01								
AB Cheloor	4	Cheloor Platinum	Client	LT	**UG**	42										
					UG	1,191	8,164	0.14			7,619	1.1	7,620	315	0.91	543
					OH	481	8,164	0.16								
RMU31 602	41	Alfa Breeza	Client	LT	**UG**	31										
					UG	31	2,751	0.00			2,473	0.3	2,474	160	0.46	277
					UG	1,429	2,751	0.02								
					OH	475	2,751	0.02								
AB Navani	5	Navani	Client	LT	**UG**	60										
					UG	60	6,804	0.01			6,496	4.0	6,500	200	0.51	304
					UG	1,150	6,804	0.10								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	531	6,804	0.13								
P17	AB CSB, 6-CSB	CSB	Department	LT	**OH**	11										
					UG	1,150	51,194	5.43	50,530	19.2	50,549	42.8	50,592	250	1.00	602
					OH	651	51,194	8.78								
AB Sky	9	Sky line	Client	LT	**UG**	67										
					UG	67	9,704	0.02			9,292	2.7	9,295	250	0.68	409
					UG	1,239	9,704	0.21								
					OH	791	9,704	0.38								
RMU ST	St. Thomas	St. Thomas	Client	HT	**UG**	24										
					UG	1,186	16,920	0.61								
					OH	807	16,920	1.19								
AB CSB	32- CSB	CSB	Client	HT	**UG**	45										
					UG	45	28,017	0.13								
					UG	1,176	28,017	1.66								
					OH	856	28,017	3.46								
AB Navani	8	Navani	Client	LT	**UG**	151										
					UG	151	4,388	0.01			4,084	1.6	4,086	200	0.50	302
					UG	1,176	4,388	0.04								
					OH	945	4,388	0.09								
AB St.	7	St. Mary's College	Client	HT	**UG**	31										
					UG	31	19,473	0.04								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	1,176	19,473	0.80								
					OH	1,032	19,473	2.01								
RMU31603	11-	DH College Road	Department	LT	**UG**	13										
					UG	1,278	90,016	18.66	87,610	36.7	87,647	1,391.2	89,038	315	1.63	977
					OH	1,001	90,016	41.71								
RMU31605	12-	Dt. HS Palakkal	Department	LT	**UG**	4										
					UG	1,411	16,004	0.65	15,442	0.8	15,442	8.0	15,450	315	0.92	553
					OH	1,001	16,004	1.32								
RMU31605	13-	Dt.HS Palakkal	Department	LT	**UG**	6										
					UG	1,413	43,869	4.90	43,139	8.8	43,139	78.0	43,217	315	1.09	651
					OH	1,001	43,869	9.91								
RMU31604	35-	Josco	Client	HT	**UG**	57										
					UG	1,461	15,789	0.66								
					OH	1,001	15,789	1.28								
RMU31606	40- DH	DH	Client	HT	**UG**	102										
					UG	1,646	1,04,575	32.44								
					OH	1,010	1,04,575	56.79								
RMU31607	19	Chemmanur	Client	HT	**UG**	195										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	1,622	22,909	1.53								
					OH	1,001	22,909	2.70								
AB SIB	18- SIB	SIB	Client	HT	**UG**	198										
					UG	198	6,158	0.02								
					UG	1,404	6,158	0.10								
					OH	1,001	6,158	0.20								
ABL51607	14-, ABL51608	8 Pole 1	Department	LT	**OH**	2										
					UG	1,475	940	0.00	538	0.0	538	0.0	538	250	0.67	402
					OH	1,003	940	0.00								
ABL51607	17-8 Pole 4	8 Pole 4	Department	LT	**OH**	2										
					UG	1,475	19,601	1.02	19,210	0.6	19,211	60.3	19,271	160	0.55	330
					OH	1,003	19,601	1.98								
G51	AB Fas, 21-	Fashion Fabrics	Department	LT	**UG**	374										
					UG	1,848	55,544	10.27	52,292	6.0	52,298	577.9	54,776	500	1.28	768
					OH	1,003	55,544	15.92			52,298	301.0				
											52,298	1,599.4				
AB Elite	20-	Elite Saree	Client	HT	**UG**	34										
					UG	1,882	12,952	0.57								
					OH	1,008	12,952	0.87								
G27	P31, 22-	Ariyagadi	Department	LT	**UG**	189										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	1,594	63,600	11.61	62,687	13.5	62,701	138.4	62,839	315	1.27	761
					OH	1,001	63,600	20.82								
G36	P39, 23-	Kuttans, ABL51612	Department	LT	**UG**	299										
					UG	1,893	55,126	10.36	54,347	13.0	54,360	153.0	54,513	250	1.02	613
					OH	1,001	55,126	15.64								
G37	RMU31 609, 34	Holy Space	Client	LT	**UG**	54										
					UG	1,947	18,201	1.16			17,692	84.0	17,776	250	0.71	425
					OH	1,001	18,201	1.71								
AB holy ht	24-	Holy Heights	Client	LT	**UG**	141										
					UG	2,034	10,874	0.43			10,208	2.0	10,210	400	1.11	664
					OH	1,001	10,874	0.61								
P40	25-	Erinjeri Ariyangadi 2	Department	LT	**OH**	50										
					UG	1,989	51,427	9.48	50,779	6.2	50,786	56.2	50,842	250	0.98	585
					OH	1,051	51,427	14.29								
G44	ABL516 13, 26-	High Road	Department	LT	**UG**	177										
					UG	2,166	49,130	9.42	48,454	5.9	48,460	98.4	48,558	250	0.95	572
					OH	1,001	49,130	12.43								
LBS	29	CT Plaza	Client	LT	**UG**	44										
					UG	44	792	0.00			516	0.0	516	160	0.46	276
					UG	1,608	792	0.00								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable – secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	1,297	792	0.00								
AB east	27	East end plaza	Client	LT	**UG**	71										
					UG	1,664	4,556	0.06			4,275	1.6	4,277	160	0.46	279
					OH	1,313	4,556	0.14								
AB adam	28-	Adam bazar	Client	LT	**UG**	99										
					UG	1,693	10,428	0.33			9,875	8.0	9,883	315	0.91	546
					OH	1,381	10,428	0.77								
AB Sadanan	33-	Sadanadhan	Client	LT	**UG**	52										
					UG	1,646	10,684	0.34			10,372	1.5	10,373	200	0.52	311
					OH	1,397	10,684	0.82								
AB Park land	30-	Park Land	Client	LT	**UG**	58										
					UG	58	3,382	0.00			3,105	0.1	3,105	160	0.46	277
					UG	1,594	3,382	0.03								
					OH	1,465	3,382	0.09								
G32	RMU31 608, 38	Shalimar	C/D	LT	**UG**	96										
					UG	1,690	39,294	4.70	38,612	3.6	38,615	60.9	38,777	250	0.86	517
					OH	1,455	39,294	11.55			38,615	2.5				
											38,615	98.5				
	NET SUM							363.28		126.0		4,983				14,621

3.17 EAST FORT FEEDER

Table 60: Loss analysis – East Fort

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/ Month	kWh/ month	kWh/ month	kWh/ month	kWh/month	kVA	kW	KWh/ month
SS	2P	Substation feeder			UG	25										
G12	RMU1/ 22	RMU31708, East Avenue	Client	LT	UG	94										
					UG	2,729	5,662	0.17			5,381	1.40	5,382	160	0.47	280
					OH	74	5,662	0.01								
G13	RMU2/ 15	RMU31709, Navya Bakery	Client	HT	UG	58										
					UG	2,786	45,346	11.37								
					OH	74	45,346	0.86								
ABL517 05	10	Sun Tower	Client	LT	UG	28										
					UG	2,663	30,555	4.93			29,577	212.05	29,789	630	1.28	766
					OH	99	30,555	0.53								
ABL517 05	32	E P Jose	Dept	LT	OH	13										
					UG	2,635	62,945	20.72	51,954	10,143	62,097	142.43	62,240	250	1.18	705
					OH	113	62,945	2.53								
	27	Selex Mall (KFC)	Client	HT	UG	10										
					UG	10	14,183	0.01								
					UG	2,792	14,183	1.11								
					OH	99										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
	28	Selex Mall (Common)	Client	HT	UG	10										
					UG	10	64,591	0.06								
					UG	2,792	64,591	23.12								
					OH	99	64,591	2.35								
	29	Selex Mall LT Connection	Client	LT	UG	20										
					UG	20	53,359	0.08			52,487	100.17	52,588	400	1.29	772
					UG	2,792	53,359	45.04								
					OH	99	53,359	0.56								
G11	11	Sindhooram Appartment	Client	LT	UG	137										
					UG	2,772	4,155	0.09			3,877	0.14	3,877	160	0.46	278
					OH	225	4,155	0.02								
P11	1	Thomson Casa	Client	LT	UG	13										
					UG	2,649	36,962	7.18			36,355	138.83	36,494	160	0.78	468
					OH	262	36,962	2.03								
P11	P12, 12	Pallikulam	Dept	LT	OH	141										
					UG	2,635	20,476	2.19	18,981	1,128	20,109	4.90	20,141	160	0.56	335
					OH	403	20,476	0.96			20,109	12.14				
											20,109	15.12				
P13	P23,33	AB-Chaldian,Chaldian	Distribution	LT	OH	4										
					UG	2,635	32,592	5.55	29,841	2,081	31,922	68.81	31,991	315	1.00	601

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	483	32,592	2.91								
P13-1	34	Brothers Lane	Dept	LT	OH	86										
					UG	2,635	55,452	16.08	44,309	10,347	54,656	22.41	54,734	315	1.20	718
					OH	565	55,452	9.85			54,656	55.17				
P14	P14-1, 13	Sakthan Tower	Client	LT	OH	190										
					UG	2,635	38,771	7.86			37,933	151.14	38,084	100	1.14	687
					OH	670	38,771	5.70								
P15	P15-1, 14	Post/Puthenpally	Dept	LT	OH	134										
					UG	2,635	19,510	1.99	18,619	447	19,066	13.64	19,080	250	0.72	431
					OH	896	19,510	1.93								
P15-1	RMU7,17	RMU31707,P I Babu	Distribution	LT	UG	24										
					UG	2,660	62,308	20.49	54,478	6,989	61,468	141.74	61,609	250	1.17	699
					OH	896	62,308	19.71								
P5	AB4/04	ABL51704/Spoon (City Castle)	Distribution	LT	OH	41										
					UG	2,635	1,20,686	76.16	83,380	34,834	1,18,214	1,083.96	1,19,298	315	2.31	1,388
					OH	115	1,20,686	9.52								
G9	Reliance(HT)	Reliance Super market	Client	HT	UG	10										
					UG	2,645	34,611	6.29								
					OH	115	34,611	0.78								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
G9	6,5	Reliance-1	Client	LT	UG	100										
					UG	2,736	8,387	0.38			7,842	1.29	7,843	315	0.91	544
					OH	115	8,387	0.05								
G9	6,5	Reliance-2	Client	LT	UG	100										
					UG	2,736	6,019	0.20			5,476	0.63	5,477	315	0.90	542
					OH	115	6,019	0.02								
P7	P21, 24	Fort Street	Client	LT	OH	19										
					UG	2,635	27,217	3.87			26,609	25.74	26,634	315	0.97	582
					OH	189	27,217	0.79								
P21	7	Fort City	Client	LT	OH	29										
					UG	2,635	7,734	0.31			7,450	0.25	7,450	160	0.47	284
					OH	217	7,734	0.07			7,450					
P17	8	Bharathakshemam	Client	LT	UG	72										
					UG	2,707	2,746	0.04			2,446	0.14	2,446	200	0.50	301
					OH	292	2,746	0.01								
P18	9	Emmatty Tower	Client	LT	UG	26										
					UG	26	22,814	0.02			22,129	5.14	22,134	400	1.13	680
					UG	2,635	22,814	2.72								
					OH	494	22,814	1.46								
RMU3	16	Candela Appartment	Client	LT	UG	37										
					UG	37	13,713	0.02			13,025	5.88	13,031	500	1.14	683
					UG	2,635	13,713	0.98								
					OH	500	13,713	0.53								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	kWh/ Month	kWh/ month	kWh/ Month	kWh/ month	kWh/ month	kWh/ month	kWh/month	kVA	kW	KWh/ month
P20	25	St-Thomas College	Client	HT	UG	16										
					UG	2,651	7,276	0.28								
					OH	653	7,276	0.20								
AB St-Thomas	26/ABI 51604	Iyyunni	Distribution	LT	OH	28										
					UG	2,635	85,200	37.96	69,151	14,974	84,125	116.81	84,242	250	1.60	958
					OH	681	85,200	27.99								
P22	2	Seemas	Client	HT	UG	54										
					UG	2,689	28,855	4.44								
					OH	125	28,855	0.59								
P10	23	Kings Way Project	Client	LT	UG	90										
					UG	2,726	1,591	0.01			1,333	0.04	1,333	100	0.43	259
					OH	141	1,591	0.00								
ABL 51708	3	Honest Bakery	Distribution	LT	OH	20										
					UG	167	36,248	0.44	32,159	3,450	35,609	23.42	35,632	315	1.03	616
					OH	2,635	36,248	19.62								
ABL 51708	RMU4, 20	RMU31703, Angelic Tower	C/D	LT	UG	81										
					UG	2,716	65,735	23.29	53,915	10,561	64,476	374.29	64,944	315	1.32	791
					OH	148	65,735	3.62			64,476	93.57				
G10	RMU5, 19	RMU 31704, Lorde Pally	Client	HT	UG	200										
					UG	2,835	16,955	1.62								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/ Month**	**kWh/ month**	**kWh/ month**	**kWh/ month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	148	16,955	0.24								
RMU6	18	East Fort Tower	Client	LT	UG	12										
					UG	2,947	3,490	0.07			3,189	0.15	3,189	200	0.50	301
					OH	148	3,490	0.01								
RMU8	30/31	E Forts Unlimited	Client	HT, LT	UG	73										
					UG	73	34,955	0.35			11,423	3.16	34,525	200	0.72	429
					UG	2,760	34,955	6.69								
					OH	245	34,955	1.69								
RMU9	21	Rappai & Sons	Client	LT	UG	305										
					UG	2,991	7,467	0.33			7,059	2.42	7,061	250	0.68	406
					OH	245	7,467	0.08								
								451.77		**94,956**		**2,817**				**16,563**

3.18 VANCHIKULAM FEEDER

Table 61: Loss analysis – Vanchikulam

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	Map no	Pole/transformer/AB	Transformer ownership	Metering point	Cable	Total distance	Energy transmitted	HT OH line loss	Energy transmitted	LT OH line loss	Energy at pole near transformer	LT Cable line loss	Transmission at transformer secondary	Capacity of DT	Transformer loss	Transformer loss
						m	kWh/ Month	kWh/ month	kWh/Month	kWh/ month	kWh/month	kWh /month	kWh/month	kVA	kW	KWh/ month
	S-S	Substation feeder														
S-S	2P	Post			**UG**	21										
P8	1	Raya Complex	Department	LT	**OH**	7										
					UG	722	39,969	1.44	39,289	3.0	39,289	29.7	39,457	250	0.9	512
					OH	1,671	39,969	6.42			39,289	138.3				
					OH	247	39,969	1.41								
P9	2	Shankaraiyar Road	Department	LT	**OH**	152										
					UG	722	51,248	2.37	49,696	13.1	49,696	48.9	49,803	250	2.4	1,445
					OH	1,671	51,248	10.56			49,696	58.2				
					OH	398	51,248	3.74								
ABL51806	3, 4	Modern	Client	LT,HT	**UG**	30										
					UG	751	24,307	0.56			17,748	24.8	23,857	250	0.7	450
					OH	1,671	24,307	2.38								
					OH	567	24,307	1.20								
RMU31802	11	WestPlaza	Client	HT	**UG**	61										
					UG	783	5,307	0.03								
					OH	1,671	5,307	0.11								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	603	5,307	0.06								
P10	8,7	Grand mall	Client	LT ,HT	**UG**	44										
					UG	766	47,632	2.17			10,173	1.0	46,968	315	1.1	663
					OH	1,671	47,632	9.12								
					OH	629	47,632	5.10								
AB Maruthi	9	Bhuvari Tower	Client	HT	**UG**	40										
					UG	840	3,497	0.01								
					OH	1,671	3,497	0.05								
					OH	645	3,497	0.03								
G2	10	AB Maruthi Maruthi Apartment	Department	LT	**UG**	72										
					UG	800	56,444	3.19	55,529	14.6	55,529	53.9	55,687	500	1.3	757
					OH	1,671	56,444	12.81			55,529	103.7				
					OH	645	56,444	7.34								
RMU31 801	6	K K Tower	Client	HT	**UG**	144										
					UG	865	9,433	0.10								
					OH	1,671	9,433	0.36								
					OH	645	9,433	0.20								
AB Salfloa	5	Salfloa	Client	HT	**UG**	21										
					UG	21	11,069	0.00								
					UG	722	11,069	0.11								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	1,671	11,069	0.49								
					OH	705	11,069	0.31								
P13	14	Fimat	Client	LT	**OH**	13										
					UG	722	3,611	0.01			3,349	0.8	3,350	100	0.4	261
					OH	1,671	3,611	0.05								
					OH	696	3,611	0.03								
RMU31803	12,13	Sunny Diamonds	Client	LT,HT	**UG**	20										
					UG	742	55,270	2.83			54,413	84.0	54,497	400	1.3	773
					OH	1,671	55,270	12.28								
					OH	696	55,270	7.60								
P13-1	15	Hawa (Temple Road)	Department	LT	**OH**	24										
					UG	722	38,322	1.33	37,739	5.8	37,739	11.6	37,818	250	0.8	504
					OH	1,671	38,322	5.90			37,739	30.1				
					OH	843	38,322	4.42			37,739	36.9				
RMU31804	16	Fathima	Client	HT	**UG**	46										
					UG	768	8,928	0.08								
					OH	1,671	8,928	0.32								
					OH	871	8,928	0.25								
AB Bhavani	17	Bhavani	Client	LT	**UG**	33										
					UG	33	11,544	0.01			10,995	2.3	10,997	315	0.9	547

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	873	11,544	0.15								
					OH	1,671	11,544	0.54								
					OH	964	11,544	0.46								
AB Sudharsan	18	Sudharsan	Client	LT	**UG**	34										
					UG	34	6,412	0.00			6,130	0.7	6,131	160	0.5	281
					UG	722	6,412	0.04								
					OH	1,671	6,412	0.17								
					OH	998	6,412	0.15								
AB Commercial	19	Commercial	Client	HT	**UG**	35										
					UG	35		-								
					UG	722	-	-								
					OH	1,671	-	-								
					OH	1,043	-	-								
RMU TBPL	33	TBPL RIO	Client	LT	**UG**	47										
					UG	776	660	0.00				-	-	400	1.1	660
					OH	1,671	660	0.00								
					OH	1,098	660	0.00								
P16	20	Kaveri Apartment	Department	LT	**OH**	153										
					UG	722	47,749	2.06	46,809	13.0	46,821	91.9	46,900	250	1.4	849
					OH	1,671	47,749	9.17								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	1,186	47,749	9.66								
RMU31 805	22	Level10	Client	HT	**UG**	33										
					UG	33		-								
					UG	722	-	-								
					OH	1,671	-	-								
					OH	902	-	-								
AB Art	21	Art of living	Client	LT	**UG**	45										
					UG	45	2,039	0.00			1,780	0.1	1,780	100	0.4	259
					UG	722	2,039	0.00								
					OH	1,671	2,039	0.02								
					OH	980	2,039	0.01								
ABL518 10	23	Refrigeration	Department	LT	**OH**	68										
					UG	722	74,902	5.07	73,603	32.1	73,603	182.9	73,786	500	1.9	1,116
					OH	1,671	74,902	22.56								
					OH	1,034	74,902	20.73								
P17	24	Sainic Gas	Client	LT	**OH**	57										
					UG	722	1,886	0.00			1,483	0.0	1,484	250	0.7	402
					OH	1,728	1,886	0.01			1,483	0.7				
					OH	1,060	1,886	0.01								
AB LIC	25	LIC	Client	LT	**UG**	50										
					UG	50	2,401	0.00			2,125	0.0	2,125	160	0.5	277
					UG	726	2,401	0.01								

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					OH	1,671	2,401	0.02								
					OH	1,169	2,401	0.02								
P18	26	RMU31806, South Plaza	Client	LT	**UG**	14										
					UG	722	38,296	1.32			37,739	49.8	37,789	250	0.8	507
					OH	1,671	38,296	5.90								
					OH	1,169	38,296	6.13								
G5	27	Sitharam Heritage	C/D	LT	**UG**	300										
					UG	310	38,898	0.95	37,936	3.9	37,936	8.4	38,391	250	0.8	507
					UG	722	38,898	1.37			37,936	22.1				
					OH	1,671	38,898	6.08			37,936	424.2				
					OH	1,342	38,898	7.25								
P19	28	RMU31807, KMJ	C/D	LT	**UG**	27										
					UG	722	9,573	0.08			9,154	0.6	9,165	250	0.7	408
					OH	1,671	9,573	0.37			9,154	9.9				
					OH	1,342	9,573	0.44								
AB Merlin	29	Merlin Hotel	Client	HT	**UG**	98										
					UG	98	22,496	0.13								
					UG	722	22,496	0.46								
					OH	1,671	22,496	2.03								
					OH	1,377	22,496	2.49								
P21	31	P22, State Hotel	Client	LT	**OH**	109										

Mapping details					Up to Transformer primary or HT metering				From consumer		LT cable - secondary of transformer		Transformer loss			
From Map no	**Map no**	**Pole/transformer/AB**	**Transformer ownership**	**Metering point**	**Cable**	**Total distance**	**Energy transmitted**	**HT OH line loss**	**Energy transmitted**	**LT OH line loss**	**Energy at pole near transformer**	**LT Cable line loss**	**Transmission at transformer secondary**	**Capacity of DT**	**Transformer loss**	**Transformer loss**
						m	**kWh/ Month**	**kWh/ month**	**kWh/Month**	**kWh/ month**	**kWh/month**	**kWh /month**	**kWh/month**	**kVA**	**kW**	**KWh/ month**
					UG	722	25,064	0.57			24,619	-	24,619	250	0.7	445
					OH	1,671	25,064	2.53								
					OH	1,476	25,064	3.31								
G6	30	Global Plaza	C/D	LT	**UG**	105										
					UG	833	13,376	0.19	12,787	0.3	12,787	0.6	12,826	315	0.9	550
					OH	1,671	13,376	0.72			12,787	38.6				
					OH	1,476	13,376	0.94								
G7	32	Love shore	Client	HT	**UG**	104										
					UG	832	28,394	0.84								
					OH	1,671	28,394	3.24								
					OH	1,476	28,394	4.25								
G8	34 (C)	Dist, Homeo Hospital	Client	HT	**UG**	47										
					UG	776	4,033	0.02								
					OH	1,671	4,033	0.07								
					OH	1,098	4,033	0.06								
	NET SUM							**229**		**85.9**		**1,455**				**12,171**

TECHNICAL LOSSES – SUMMARY

The technical losses comprising all the section above is estimated in feeder wise and given in the following tables.

- **Mission Quarters feeder**

Table 62: T & D loss summary – Mission Quarters feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**1,05,54,628**	**87.35**
LT Overhead line loss	13,11,595	**10.86**
LT Cable loss	24,007	**0.20**
Transformer Loss	1,88,730	**1.56**
HT overhead & cable line loss	3,617	**0.03**
Total loss	**15,27,949**	**12.65**
Estimated Consumption at feeder level	**1,20,82,577**	**100**
Registered consumption at feeder level meter	**1,10,66,985**	

- **Veleyanoor feeder**

Table 63: T & D loss – Veleyanoor feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**85,50,734**	**90.31**
LT Overhead line loss	7,86,782	**8.31**
LT Cable loss	17,823	**0.19**
Transformer Loss	1,11,085	**1.17**
HT overhead & cable line loss	1,540	**0.02**
Total loss	**9,17,229**	**9.69**
Estimated Consumption at feeder level	**94,67,963**	**100**
Registered consumption at feeder level meter	**92,33,985**	

- **Koorkanchery feeder**

Table 64: T & D loss Koorkanchery feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**96,80,803**	**80.80**
LT Overhead line loss	21,02,562	**17.55**
LT Cable loss	38,147	**0.32**

Transformer Loss	1,53,756	**1.28**
HT overhead & cable line loss	5,857	**0.05**
Total loss	**23,00,322**	**19.20**
Estimated Consumption at feeder level	**1,19,81,125**	**100**
Registered consumption at feeder level meter	**96,13,985**	

- **Paravattani feeder**

Table 65: T & D loss Summary – Paravattany feeder

Particulars	**Units**	**Percentage**
	kWh/annum	**%**
Net energy sales - annual	**95,66,992**	**83.73**
LT Overhead line loss	16,22,214	**14.20**
LT Cable loss	60,403	**0.53**
Transformer Loss	1,70,710	**1.49**
HT overhead & cable line loss	6,111	**0.05**
Total loss	**18,59,438**	**16.27**
Estimated Consumption at feeder level	**1,14,26,430**	**100.00**
Registered consumption at feeder level meter	**98,93,985**	

- **Aranattukara feeder**

Table 66: T & D loss Summary – Aranattukara feeder

Particulars	**Units**	**Percentage**
	kWh/annum	**%**
Net energy sales - annual	**1,27,30,120**	**105.36**
LT Overhead line loss	27,68,389	**22.91**
LT Cable loss	58,929	**0.49**
Transformer Loss	2,40,311	**1.99**
HT overhead & cable line loss	13,918	**0.12**
Total loss	**30,81,547**	**25.50**
Estimated Consumption at feeder level	**1,58,11,667**	**100**
Registered consumption at feeder level meter	**1,36,86,785**	

- **Jubilee Mission feeder**

Table 67: T & D loss summary – JMC feeder

Particulars	**Units**	**Percentage**
	kWh/annum	**%**
Net energy sales - annual	**88,03,320**	**99.95**
LT Overhead line loss	-	**0.00**

LT Cable loss	-	**0.00**
Transformer Loss	-	**0.00**
HT overhead & cable line loss	4,017	**0.05**
Total loss	**4,017**	**0.05**
Estimated Consumption at feeder level	**88,07,337**	**100**
Registered consumption at feeder level meter	**91,67,585**	

- **Vivekodayam feeder**

Table 68: T & D loss Summary – Vivekodayam feeder

Particulars	**Units**	**Percentage**
	kWh/annum	**%**
Net energy sales - annual	**75,25,125**	**88.73**
LT Overhead line loss	8,10,183	**9.55**
LT Cable loss	25,512	**0.30**
Transformer Loss	1,18,528	**1.40**
HT overhead & cable line loss	1,790	**0.02**
Total loss	**9,56,013**	**11.27**
Estimated Consumption at feeder level	**84,81,138**	**100**
Registered consumption at feeder level meter	**89,23,385**	

- **Bini feeder**

Table 69: T & D loss summary – Bini feeder

Particulars	**Units**	**Percentage**
	kWh/annum	**%**
Net energy sales - annual	**68,13,721**	**94.29**
LT Overhead line loss	3,05,455	**4.23**
LT Cable loss	5,954	**0.08**
Transformer Loss	1,00,438	**1.39**
HT overhead & cable line loss	1,081	**0.01**
Total loss	**4,12,928**	**5.71**
Estimated Consumption at feeder level	**72,26,649**	**100**
Registered consumption at feeder level meter	**75,76,985**	

- **Poonkunam feeder**

Table 70: T & D loss Summary – Poonkunam feeder

Particulars	**Units**	**Percentage**
	kWh/annum	**%**
Net energy sales - annual	**88,18,819**	**97.88**

Particulars	Units	Percentage
	kWh/annum	%
LT Overhead line loss	1,852	**0.02**
LT Cable loss	10,967	**0.12**
Transformer Loss	1,76,780	**1.96**
HT overhead & cable line loss	1,681	**0.02**
Total loss	**1,91,281**	**2.12**
Estimated Consumption at feeder level	**90,10,100**	**100**
Registered consumption at feeder level meter	**95,68,985**	

- **Keralavarma feeder**

Table 71: T & D loss – Keralavarma feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**1,04,72,113**	**87.69**
LT Overhead line loss	12,00,329	**10.05**
LT Cable loss	34,382	**0.29**
Transformer Loss	2,27,316	**1.90**
HT overhead & cable line loss	8,286	**0.07**
Total loss	**14,70,313**	**12.31**
Estimated Consumption at feeder level	**1,19,42,426**	**100**
Registered consumption at feeder level meter	**1,11,10,985**	

- **Ramanilayam feeder**

Table 72: T & D loss Summary – Ramanilayam feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**80,99,035**	**96.22**
LT Overhead line loss	2,13,784	**2.54**
LT Cable loss	7,839	**0.09**
Transformer Loss	94,556	**1.12**
HT overhead & cable line loss	1,999	**0.02**
Total loss	**3,18,178**	**3.78**
Estimated Consumption at feeder level	**84,17,213**	**100**
Registered consumption at feeder level meter	**93,52,985**	

➢ M.O Road feeder

Table 73: T & D loss – M.O Road feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**1,18,92,347**	**98.49**
LT Overhead line loss	1,693	**0.01**
LT Cable loss	16,520	**0.14**
Transformer Loss	1,61,309	**1.34**
HT overhead & cable line loss	2,820	**0.02**
Total loss	**1,82,342**	**1.51**
Estimated Consumption at feeder level	**1,20,74,689**	**100**
Registered consumption at feeder level meter	**1,24,32,985**	

➢ Kottapuram feeder

Table 74: T & D loss – Kottapuram feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**66,70,004**	**58.37**
LT Overhead line loss	3,17,754	**2.78**
LT Cable loss	3,788	**0.03**
Transformer Loss	23,063	**0.20**
HT overhead & cable line loss	582	**0.01**
Total loss	**3,45,188**	**3.02**
Estimated Consumption at feeder level	**70,15,192**	**100.00**
Registered consumption at feeder level meter	**73,20,985**	

➢ Chembukavu feeder

Table 75: T & D loss – Chembukavu feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**1,06,34,994**	**89.64**
LT Overhead line loss	10,52,112	**8.87**
LT Cable loss	26,633	**0.22**
Transformer Loss	1,45,125	**1.22**
HT overhead & cable line loss	5,207	**0.04**
Total loss	**12,29,077**	**10.36**
Estimated Consumption at feeder level	**1,18,64,071**	**100**
Registered consumption at feeder level meter	**1,10,96,985**	

➢ Shornur road feeder

Table 76: T & D loss – Shornur road feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales - annual	**1,13,06,724**	**94.21**
LT Overhead line loss	4,42,258	**3.68**
LT Cable loss	35,970	**0.30**
Transformer Loss	2,14,735	**1.79**
HT overhead & cable line loss	2,486	**0.02**
Total loss	**6,95,449**	**5.79**
Estimated Consumption at feeder level	**1,20,02,173**	**100**
Registered consumption at feeder level meter	**1,21,34,985**	

➢ District Hospital feeder

Table 77: T & D loss – District Hospital feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales – annual	**1,21,36,776**	**98.05**
LT Overhead line loss	1,512	**0.01**
LT Cable loss	59,793	**0.48**
Transformer Loss	1,75,451	**1.42**
HT overhead & cable line loss	4,359	**0.04**
Total loss	**2,41,116**	**1.95**
Estimated Consumption at feeder level	**1,23,77,892**	**100**
Registered consumption at feeder level meter	**1,38,63,985**	

➢ East Fort feeder

Table 78: T & D loss – Eastfort feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales – annual	**1,16,20,852**	**89.40**
LT Overhead line loss	11,39,469	**8.77**
LT Cable loss	33,804	**0.26**
Transformer Loss	1,98,757	**1.53**
HT overhead & cable line loss	5,421	**0.04**
Total loss	**13,77,451**	**10.60**
Estimated Consumption at feeder level	**1,29,98,303**	**100**
Registered consumption at feeder level meter	**1,31,60,000**	

- **Vanchikulam feeder**

Table 79: T & D loss – Vanchikulam feeder

Particulars	Units	Percentage
	kWh/annum	%
Net energy sales – annual	**85,54,967**	**98.08**
LT Overhead line loss	1,031	**0.01**
LT Cable loss	17,455	**0.20**
Transformer Loss	1,46,058	**1.67**
HT overhead & cable line loss	2,752	**0.03**
Total loss	**1,67,296**	**1.92**
Estimated Consumption at feeder level	**87,22,263**	**100**
Registered consumption at feeder level meter	**88,66,985**	

- ***The variation or high mismatch in the actual feeder meter reading and the calculated reading through the loss analysis, is due to the back feeding among the feeders during the power failures or maintenance.***
- *During energy audit period, auditors attempted to verify the error in the meters by analysing the feeder meters at the substation using the power quality analysers and hereby summarised in commercial losses section.*

4. HT/LT RATIO

The total length of the LT line from the transformer to the consumer end at the period of audit is 287.953 km. However, the separation of OH and UG among the LT side is still in the process for the RDSS implementation.

The total 11kV HT line length from the switching station to the DT or HT consumers are 121.013 km. Among this, HT OH line length shares the most with 43.88 km, UG cable with 75.25 km and ABC with 1.88 km

HT/LT ratio is the total distance of HT line to the LT lines in a system. The HT/LT ratio has calculated with respect to the total LT line where;

HT:LT = 1: 2.30, registered during the FY 2024-25, which is higher than the recommended level of 1:1.

5. SUBSIDY COMPUTATION AND ANALYSIS

The DISCOM did not received subsidy from any government or government institutions on any category during the FY 2024-25.

6. TREND ANALYSIS

The historical energy accounts/loss of the TCED DISCOM is tabulated below.

Table 80: Historical energy accounts/loss of the DISCOM

	1. T&D Losses analysis for 2022-23				2. T&D Losses analysis for 2023-24			
Particulars	**Input energy**	**Total Billed energy (MU)**	**Total energy Loss (MU)**	**T&D losses %**	**Input energy**	**Total Billed energy (MU)**	**Total energ y Loss (MU)**	**T&D losses %**
	(MU)				(MU)			
DISCOM - TCED	159.665	148.36	11.305	**7.08**	182.078	169.87	12.209	**6.71**

The graphical representation of the losses for the five years (including audit period FY 2024-25) is given in the figure below.

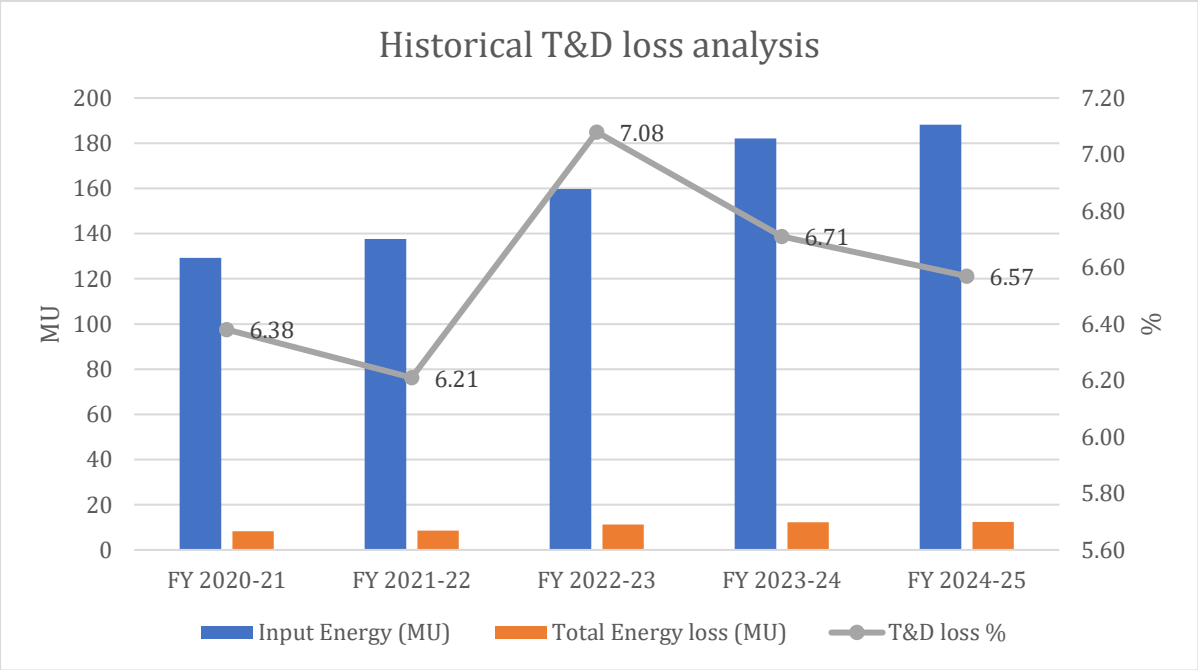

Figure 24: Historical T & D loss with audited data

- The T&D loss % shows a decrease from FY 2023-24 to FY 2024-25.

ENERGY AUDIT FINDINGS

1 COMPLIANCE TO BEE REGULATIONS

The compliance status of DISCOM to various provisions of BEE Regulations 2021 is analysed and presented below.

Clause No	Clause Details	Subclause Details	Present Status	Action plan/ comments by DISCOM
3	Intervals of time for conduct of annual energy audit	a. Conducted an annual energy audit for every financial year and submitted the annual energy audit report to the Bureau and respective State Designated Agency and also made available on the website of the electricity distribution company within a period of four months from the expiry of the relevant financial year	a. Annual energy audit for last 3 years being conducted. Report used to submit to BEE and SDA. Report uploaded onto TCED website.	
4	Intervals of time for conduct of periodic energy accounting	a. All feeder wise, circle wise and division wise periodic energy accounting is conducted by the energy manager of the electricity distribution company for each quarter of the financial year.	a. Periodic energy accounting for all quarters of FY 24-25 have been prepared by the DC and submitted.	
		b. Submitted the periodic energy accounting report to the Bureau and respective State Designated Agency and also made available on the website of electricity distribution company within forty-five days from the date of the periodic energy accounting.	b. Periodic energy accounting for all quarters of FY 24-25 have been prepared by the DC and submitted through mail.	
		c. Electricity distribution company conducted its first periodic energy accounting, for the last quarter of the financial year immediately preceding the date of such commencement (i.e., 13th May 2025).	c. DC has submitted its first periodic energy accounting for Q4.	
		d. Electricity distribution company conducted its subsequent periodic energy accounting for each quarter of the financial year for a period of two financial years from the date of such commencement, and submit the periodic energy accounting report within sixty days from the date of periodic energy accounting	d. The DC used to submit the periodic energy auditing reports as per the Energy Audit regulations.	

Clause No	Clause Details	Subclause Details	Present Status	Action plan/ comments by DISCOM
5	Pre-requisites for annual energy audit and periodic energy accounting	a. Identification and mapping of all of the electrical network assets	a. Mapping of HT line and transformers conducted by the AEA and LT lines are getting mapped by the DISCOM.	The mapping of all the assets such as transformer, pole and consumer meters will be completed by June 2026.
		b. Identification and mapping of high tension and low-tension consumers	b. All the HT consumers have been mapped by AEA and the LT consumers will be mapped by DISCOM	The mapping of LT consumers will be completed by June 2026
		c. Development and implementation of information technology enabled energy accounting and audit system, including associated software.	c. DC has LECTOREN software which does only the billing one as per the consumption input.	DC is planning to implement the software as along with the RDSS implementation of the smart meter.
		d. Electricity distribution company ensures the installation of functional meters for all consumers, transformers and feeders. Meter installation is done in a phased manner within a period of three financial years from the date of the commencement of these regulations in accordance with the trajectory set out in the First Schedule	d. All 11kV feeders have been metered. All consumers have been metered under the DISCOM. As of audit period (11th August 2025) out of total 495 distribution transformers, 343 have been metered.	Rest of the DT meters will be completed along with the RDSS scheme June 2026.
		d.1 100% Communicable Feeder Metering integrated with AMI, by 31st December 2022 along with replacement of existing non- communicable feeder meters.	d.1 100% of the feeders are having DLMS (Device Language Message Specification Communicable Meters).	
		d2. All Distribution Transformers (other than HVDS DT up to 25kVA and other DTs below 25 kVA) shall be metered with communicable meters. Communicable DT Metering for the following areas/ consumers to be completed by December 2024 and in balance areas by December 2026:	d.2 69.29% of the DTs are provided with communicable meter as on 12th August 2025.	Balance will be completed by the end of financial year 2025-26 as per the RDSS progress report.

Clause No	Clause Details	Subclause Details	Present Status	Action plan/ comments by DISCOM
		100% Communicable Feeder Metering integrated with AMI, by 31st December 2022 along with replacement of existing non-communicable feeder meters.		
		d.2.1. All Electricity Divisions of 500 AMRUT cities, with AT&C Losses > 15%	d.2.1. Not Relevant for DC.	
		d.2.2. All Union Territories (for areas with technical difficulty, non-communicable meters may be installed)	d.2.2. Not Relevant for DC	
		d.2.3. All Industrial and Commercial consumers	d.2.3. 100% of the DTR meters is installed in the DISCOM	
		d.2.4. All Government offices at Block level and above	D2.4. DC installed 90% of the government offices at block level with communicable meter.	Plans to do the remaining installations in phased manner
		d.2.5. Other high loss areas i.e., rural areas with losses more than 25% and urban areas with losses more than 15%	d.2.5. The whole DISCOM comes under the Urban area and thus not relevant for DC.	
		d.3. Prepaid Smart Consumer Metering to be completed for all directly connected meters and AMR in case of other meters, by December 2023 in the following areas:		
		d.3.1. All Electricity Divisions of 500 AMRUT cities, with AT&C Losses > 15%;	d.3.1. Not applicable as AT&C loss is less than 15%.	
		d.3.2. All Union Territories (for areas with technical difficulty, prepaid meters to be installed);	d.3.2. Not Relevant for DC.	
		d.3.3. All Industrial and Commercial consumers;	d.3.3. DC has installed 138 communicable metering-AMI for HT consumers and 34687 meters in LT, industrial and commercial.	Plans to do the work in phased manner along with RDSS by June 2026.
		d.3.4. All Government offices at Block level and above;	d.3.4. DC installed 90% of the government offices at block level with communicable meter.	Plans to do the work in phased manner along with RDSS by June 2026.

<table>
<tr><th>Clause No</th><th>Clause Details</th><th>Subclause Details</th><th>Present Status</th><th>Action plan/ comments by DISCOM</th></tr>
<tr><td></td><td></td><td>d.3.5. Other high loss areas i.e. rural areas with losses more than 25% and urban areas with losses more than 15%.</td><td>d.3.5. Not applicable as T&D loss is less than 15%</td><td></td></tr>
<tr><td></td><td></td><td>d4. Consumer Metering: 98% by FY 2023-24 99% by FY 2024-25</td><td>d4. 100% of the consumers are metered.</td><td></td></tr>
<tr><td></td><td></td><td>d.5. Targets for functional meters.
<table>
<tr><td>Meter</td><td>FY 22-23</td><td>FY 23-24</td><td>FY24-25</td></tr>
<tr><td>Feeder metering</td><td>98.5%</td><td>99.5%</td><td>99.5%</td></tr>
<tr><td>DT metering</td><td>90%</td><td>95%</td><td>98%</td></tr>
</table></td><td>d5. 100% of the feeders are metered. 95% of the DT are metered. 100% of the consumers are metered.</td><td>DT metering will complete by FY 2025-26 along with RDSS scheme.</td></tr>
<tr><td></td><td></td><td>e. e1. All distribution transformers (other than high voltage distribution system up to 25kVA and other distribution system below 25 kVA) is metered with communicable meters.</td><td>e.1. DC yet to start the work</td><td>DT metering will start in phased manner.</td></tr>
<tr><td></td><td></td><td>e.2.And existing non-communicable distribution transformer meters is replaced with communicable meters and integrated with advanced metering infrastructure.</td><td>e.2. Yet to start the work</td><td>DT metering will start in phased manner along with RDSS smart meter installation scheme.</td></tr>
<tr><td></td><td></td><td>e. Electricity distribution company has established an information technology enabled system to create energy accounting reports without any manual interference and such systems may be within a period of three years from the date of the commencement of these regulations in case of urban and priority area consumers; and within five years from the date of the commencement of these regulations in case of rural consumers</td><td>f. Yet to start the work</td><td>After the implementation of RDSS scheme, the information technology enabled system will be integrated to it.</td></tr>
<tr><td></td><td></td><td>g. Electricity distribution company has a centralized energy accounting and audit cell comprising of— (i) a nodal officer, an energy manager and an information technology manager, having professional experience of not less than five years; and (ii) a financial manager</td><td>g. DISCOM has energy audit cell. List is mentioned in the audit report. Certified energy auditor is present for the DISCOM.</td><td></td></tr>
</table>

Clause No	Clause Details	Subclause Details	Present Status	Action plan/ comments by DISCOM
		having professional experience of not less than five years		
6	Reporting requirements for annual energy audit and periodic energy accounting	a. Electricity distribution company has a nodal officer, who is a full-time employee of the electricity distribution company in the rank of the Chief Engineer or above, for the purpose of reporting of the annual energy audit and periodic energy accounting and communicate the same to the Bureau.	a. The DC is complying with this requirement	
		b. Electricity distribution company ensures that the energy accounting data is generated from a metering system or till such time the metering system is not in place, by an agreed method of assumption as may be prescribed by the State Commission.	b. DC has already had an agreed system of energy accounting as prescribed by the state commission. Yet to implement the system from metering values.	The completion of the energy accounting data will be generated from the metering system by the FY 2025-26.
		c. Metering of distribution transformers at High Voltage Distribution System up to 25KVA is done on cluster meter installed by the electricity distribution company	c. Not applicable	
		d. The energy accounting and audit system and software is developed to create monthly, quarterly and yearly energy accounting reports.	d. The DC is yet implement the same.	Will be completed along with the implementation of RDSS scheme by June 2026.
		e. Electricity distribution company has provided the details of the information technology system in place as specified in clause (f) of regulation 5 that ensures minimal manual intervention in creating the energy accounting reports and any manual intervention of any nature, in respect of the period specified therein, shall be clearly indicated in the periodic energy accounting report	e. The DC is yet to implement the same	Will be completed along with the implementation of RDSS scheme by June 2026.

2 NOTES OF THE EA/EM ALONG WITH QUERIES AND REPLIES TO DATA GAPS

The following tables shows the query by AEA, the response from EA of DISCOM and Notes by AEA.

Table 81: Queries and replies to data gaps

Sl no	Query by EA	Response by EA of DISCOM	Notes by AEA
1	Expected completion date for LT line mapping and assets?	As per the action plan to RDSS, expected time of completion is June 2026.	AEA started mapping the HT line and transformer and covered 100% of the Total DT, the total 11 KV feeders & the total consumers
2	When we analysed the loss of 18 feeder, variation observed in the unit sales. Found that very lower than the feeder meter. Any issue in feeder metering?	There is no issue in feeder metering. The difference is due to the back feeding the supply to certain number of consumers in a particular feeder, through interlink poles. For eg: Bini feeder have the option for back feed from Ramanilayam, Vivekodayam and MO road feeders. Back fed unit data not accounted properly in the substation as there is no boundary meter to account the same.	Such that, we have analysed actual loss among the feeder rather than basing on the feeder meter.
3	Why is there observed duplication of solar generation data for both LT and HT?	It was due to the software mistake. TCED will correct the same	Duplication of the solar export data is being corrected and rectified.
4	The KSEBL energy meter and the TCED feeder-wise energy meter readings are not matching. An error has been observed. However, when we checked the TOD meter by bypassing the Potential Transformer (PT) and Current Transformer (CT), the values were observed to match. Why?	It is due to the error in CT ratio. Current transformer (CT) is not calibrated for last ten years.	Calibrate the current transformers (CTs) and if required replace it with new one.
5	Why is there no proper updating of transformer numbers and associated feeders in the software when new transformers and consumers are added to the consumer database for both LT and HT categories?	It was due to the software mistake. TCED will correct the same while during the implementation of smart meter in the RDSS scheme	Recommending to implement the same soon within the stipulated time period as per the Ministry of power gazette notification on DISCOM.

CONCLUSION AND ACTION PLANS

1 CRITICAL COMMENTS AND ANALYSIS BY ENERGY AUDITOR

11KV FEEDER METERING AND ENERGY AUDIT

The DISCOM has 100% metering for all the 11 kV feeders and has provided energy input and consumption/ sale data of all the 11 KV feeders (11 kV feeders – 18 nos).

The process of checking the functioning and calibration of the 11 KV feeder meters is an on-going process and can be tested through M/s KSEBL, TMR unit as per CEA regulation.

ANALYSIS ON T&D LOSSES AND AT&C LOSSES

1. **% of losses – Aggregate**: - The overall Technical Loss (T&D Loss) is 6.57% and overall AT&C Loss is 7.68% for FY 2024-25. This reflects an overall collection efficiency of 98.81%. The detailed HT, LT and Transformer losses with respect to the input energy is shown in table below.

Table 82: Analysis on T&D losses

Particulars	Units	Values**
Total energy purchased	MU	188.19
Total energy sales	MU	175.82
Quantum of losses at HT level	**MU**	**0.053**
	%	**0.03**
Quantum of LT level losses (LT level and Transformer losses)	**MU**	12.32
	%	**6.55**
Total losses	**MU**	12.37
	%	**6.57**
Collection efficiency	**%**	**98.81%**
AT & C loss	**%**	**7.68%**

Values with full decimal places.

COMPLIANCE TO RENEWABLE PURCHASE OBLIGATIONS

TCED purchasing the 96.97% of the power consumed through KSEBL. As the KSEBL is on the verge of meeting the RPO obligation, the same can consider for the TCED. However, TCED is generating 3.03% of the total consumption through its consumers in net metering tariff by roof top solar method and through its own corporation buildings.

Table 83: Solar generation share

Total Energy Consumption FY 2024-25 (MU)	**188.19**	
Details	**Solar generation**	**Non-solar generation**
Present status - MU	5.71	0
Present status - %	3.03%	0

2 ENERGY CONSERVATION MEASURES

REPLACING HT & LT OVERHEAD LINES WITH UG CABLES

Background

As the location, Thrissur, is known for various festivals yearly, the crowd and the risk possess in the transmission of power through overhead line stays. TCED has initiated to change all the major location, identified disaster prone areas, with UG cables, especially in the HT side. Also, this will reduce the overall loss in the system.

The details of the HT & LT overhead lines in TCED for the audited 4 feeders are summarized in the table given below as sample basis. The distance given below in table are considered for the calculation.

TABLE 84 : OVERHEAD LINES DETAILS

OH, Line type	Voltage level	Distance in km	Resistance of the line Ω/km
Racoon	11 kV	9.075	0.3712
Rabbit	415 V	18.11	0.543

Proposal

1. The resistance per line length for UG cables is 0.13 Ω/km for 300 sqmm XLPE which will reduce the power loss through HT overhead line and thereby the net power losses in the system. Estimated reduction in energy loss is 70% from the present losses.
2. The detailed calculation for savings has been done for 4 feeders which is applicable to remaining 12 feeders and financial viability is shown in the table given below.

Calculation

TABLE 85 : ECM 01

Particulars	Units	Equation	Bini	Ramanilayam	Chembukavu	Shornur road
Present HT Line loss	kWh/ annum	A	936	1764	3974	1813
Present LT line loss	kWh/ annum	B	305448	213780	1052100	442248
Estimated HT line loss after reconductoring with UG	kWh/ annum	C = A x 0.13/0.3712	328	617	1391	635
Estimated LT line loss after reconductoring with UG	kWh/ annum	D = B x 0.13/0.543	73002	51093	251452	105697
Annual Savings	**kWh/ annum**	E = C + D	233055	163833	803231	337729
HT line Distance to be reconductored with UG	km	F	1.998	1.619	3.448	2
LT line Distance to be reconductored with UG	km	G	2.52	4.69	6.53	4.37
Total distance	km	H = F + G	4.518	6.309	9.978	6.37
Energy charges	Rs/kWh	J	6.65	6.65	6.65	6.65
Reconductoring charges as per TCED estimate	Rs/km	K	6,50,000	6,50,000	6,50,000	6,50,000
Annual Financial savings	Rs/ annum	L = E x J	15,49,813	10,89,491	53,41,488	22,45,901
Investment cost	**Rs**	M = K x H	29,36,700	41,00,850	64,85,700	41,40,500
Net Annual Financial Savings	**Rs**	N = Total of L	1,02,26,693			
Net Investment	**Rs**	P = Total of M	1,76,63,750			
Simple Pay Back Period	**Months**	Q = P x 12/N	21			

***Resistance of UG cable = 0.13 Ω/km*
Resistance of HT Racoon OH line cable = 0.3712 Ω/km
Resistance of LT Rabbit OH line cable = 0.543 Ω/km

POWER FACTOR IMPROVEMENT TO NEARY UNITY

Background

1. The average power factor during the measurement period (5-hour logging) at 110kV incomer was 0.98 lagging.
2. Since January 2025, TCED receives combined bill (110kV and 66 kV combined), in which PF registered was 0.97 lagging.
3. TCED is receiving PF incentive for maintaining the PF above 0.95 lag and unity PF, and received Rs 31 lakhs within three months.
4. However, while measuring the feeder level power parameters during the audit period, the following one shows lower PF during the measurement period (normal period).

TABLE 86: PF & REACTIVE POWER OF MAJOR FEEDERS

Sl no	Feeder name	Average PF	Measured KVAR - Avg	Incomer
1	Poonkunnam	0.97 lag	228	66kV
2	Kottappuram	0.92 lag	247	110kV
3	Aranattukkara	0.98 lag	389	66kV

Proposal

1. Install HT capacitors either at the 11-kV side or at the 33-kV substation to maintain the PF in the section.
2. Estimated that a total of 165 kVAr will be sufficient to maintain the PF at 0.99 lag.
3. Awareness campaign shall be given to major consumers to install capacitors especially for the commercial buildings and apartment flats which will significantly reduce the losses in the respective feeders along with the improvement in PF.
4. Detailed analysis shall do for the installation of capacitors in the feeder level.

Table 87: ECM 02

Month	Power Factor present	Billing Demand	Proposed PF	Billing Demand after PF improvement	Reduction in Billing Demand	Reduction in Demand Charges	Estimated reactive power
		kVA		kVA	kVA	Rs	kVAr
Jan-25	0.97	33,607	0.99	32,928	679	2,71,572	165.05
Feb-25	0.97	34,346	0.99	33,652	694	2,77,543	168.68
Mar-25	0.97	38,008	0.99	37,240	768	3,07,135	186.67
Annual reduction in demand charges (Rs/Annum)						34,25,002.02	
Annual energy charges (Rs/Annum)						41,44,73,400	
Present average annual PF						0.97	
Incentives towards improving PF from 0.97 to 0.99 (Rs/Annum)						41,44,734	
Present annual penalty paid towards low power factor (Rs/Annum)						Nil	
Net annual savings via PF imrovement (Rs/Annum)						75,69,736	
Estimated investment cost for the improvisation (awareness campaign among major consumers, Installation of 165 kVAr HT or LT capacitors)						80,00,000	
Simple payback period (Months)						13	

ANNEXURE: COLLECTED DATA

1. ABOUT THE ACCREDITED ENERGY AUDIT FIRM

Centre for Energy Environment and Productivity (CEEP) is an Empanelled Accredited Energy Auditing Firm (EAEA) recognised by BEE. Consulting and training in the areas of energy audit, ISO 50001, cleaner production and environmental management,

Empanelled Accredited Energy Auditor with Bureau of Energy Efficiency (BEE) which have wide experience in the energy audit sector and have conducted the same in Chemical, Textile, Steel and DISCOM.

NAME AND DETAILS OF ENERGY MANAGER/AEA

M/s TCED, Thrissur District-Kerala -680001 have a BEE Certified Energy Auditor – Mr. Nikhil B (CEA – 24811), whom will be the signatory for all BEE activities.

On behalf of Centre for Energy Environment and Productivity (CEEP), Mr. Ashok K M P (CEA 34760/22) signed the quarterly Energy accounting report for the financial year 2024-25 and will be sign for the upcoming FY 2025-26.

The contact details of Accredited energy auditor and Energy manager from CEEP is given in the table below.

TABLE 88: CONTACT DETAILS OF AEA & CEA

Sr No	Name	Certification	EM/EA/AEA/ Registration No	Phone no	Email
1	Mr. J Nagesh Kumar	• Accredited Energy Auditor	AEA-0133	9444882553, 8668115663	ceepnagesh@gmail.com
2	Mr. Sunil kumar V K	• Sector Expert	EA – 3642	9497752463	vkoilothsunil@gmail.com
3	Mr. Ashok K M P	• Certified Energy Auditor	EA-34760/22	7356111991	ashokkmp@gmail.com
4	Ms. Della David	• Certified Energy Auditor	EA 34867/22	7356111992	delladavid19984@gmail.com

2. CHECKLIST PREPARED BY AUDITING FIRM

1. KSEB bill –FY 2024-25 – April to March
2. Truing up & ARR Document –FY
3. Bill collection data as per the performa for the FY
4. Annual financial statement – P&L – balance sheet
5. Electricity Transmission and consumption data: Both FY (year wise)
    1. Substation meter reading
    2. Feeder meter readings -
    3. HT consumer meter reading - corresponding feeder wise
    4. LT consumer meter reading
    5. Solar export data – unit, location, size of the plant, voltage level, metering type (net or gross), feeder name, consumer no:
6. Transformer details
    1. Incomer transformer data
    2. Feeder wise transformer data (HT and DT separately)
    3. Name plate details of transformers
    4. No load and Copper loss of transformers
7. Energy Meter data
    1. Feeder meter & DT meter – serial no., type of meter
    2. Consumer meter – type & its number
8. HT network diagram (GRID Map)
9. Incomer substation single line diagram
10. Cable details
    1. HT cable – type, location, size, length
    2. LT cable – type, location, size, length
    3. HT & LT overhead line – type
11. Street light – number, location (estimate)
12. Quarterly Performa sheet submitted during the last FY to BEE

3. APPROACH, SCOPE & METHODOLOGY OF ENERGY AUDIT

PERIOD OF AUDIT

The energy audit field study was carried out during the period from 1st July 2025 to 31st July 2025 for the field study and the activites carrie out during the study is given in the table below.

Table 89: Activity chart – Energy audit

ACTIVITIES
• Kick-off meeting with the concerned DISCOM officials • Data collection • site survey plan
• Site survey • 11kV HT line mapping • DT mapping • Feeder wise measurement at switching station. • Metering deviations of major HT consumers.
• Verification of T&D Losses, other Calculation • Finalization of form and submission of draft report

SCOPE OF AUDIT

1. Study and validation of the methodology adopted, data source and its accuracy of the energy audit works carried out for internal as well as external reporting in the following areas.
    a) 11 kV level for study of 11 kV distribution loss in 06 feeders.
        - Losses incurred in individual 11 kV feeders
        - Calculation of technical loss of 11 kV line
    b) Sample LT level study of Distribution transformer and LT distribution loss.
        - Losses incurred in LT line of different 11/0.433 kV distribution transformer in each feeder on 10% sample basis.
        - Calculation of technical loss of LT line with actual LT line data.
        - Selection of the distribution transformer shall be based on the differentiated consumer pattern, length of the distribution lines, old lines etc.
2. Collection and Review of the energy related data of last Financial Year (FY) in the Proforma by visiting the DISCOM physically.
3. Verification of existing pattern of energy distribution across periphery of electricity distribution company
4. Collection and verification of energy flow data of electricity distribution company at all applicable voltage level of distribution network.
5. Collection of data on energy received and distributed by DISCOM and verify the accuracy of data

6. Collection & analysis the data and prepare the same with report;
7. Input energy details:
    a) Collection of input energy from recorded system meter reading
    b) All the inputs points of transmission system
    c) Details provided by transmission unit
    d) System loading and Captures infrastructure details (i.e., no of circle, division, sub-division, feeders, DTs, & Consumers).
8. Parameters for computation of distribution losses:
    a) Details of open access, HT sale, LT sale and transmission losses
    b) Number of consumers category wise in each circle
    c) Consumers connected load category wise in each circle
    d) Details of billed and un-billed energy category wise of each circle
    e) Metered and un-metered details.
    f) Boundary meter details
    g) Energy Cost and Tariff data
    h) Source of energy Supply (e.g., electricity from grid or self-generation), including generation from renewables;
    i) Energy supplied to Open Access Consumers which is directly purchased by Open Access Consumers from any supplier other than electricity distribution company
9. Monitoring and verifications of input energy and consumption pattern at various voltage levels
10. Identify the areas of energy leakage, wastage or inefficient use;
11. Identify high loss-making areas/networks, for initiating target based corrective action;
12. Identify overloaded segments of the network for necessary capacity additions.
13. Computation of agriculture consumption (approved by SERC)
14. Methodology for loss computation various losses.
15. Computation of Average Billing Rate (ABR)
    a) Total revenue billed category wise.
    b) Category wise ABR with tariff subsidy.
    c) Category wise ABR without tariff subsidy.
    d) Collection Efficiency (Category wise) and computation of AT&C loss.
16. Observe and compile various Energy Conservation (ENCON) options implemented by the DISCOM and prepared report containing details of expenditure made by DC along with saving and payback period.
17. Recommendations to facilitate energy audit, energy accounting and improve energy efficiency

18. Study the details of loss/gain of DISCOM, analysis of Average Cost of Supply (ACS) and Average Revenue realized (ARR) gap, details of energy charges/Power purchase cost along with the financial analysis.
19. Current System Metering Status at various voltage level of DISCOM
    a) Status of Functional meters for all consumers, transformers and feeders.
    b) Status of default meters (non-functional meters) for all consumers, transformers and feeders
20. Current status of pre-requisites mentioned in regulations.
21. Copies of relevant authentic and certified documents should support the report. Each document should be sealed and signed by DISCOM authorized representative as well as by agency's AEA.
22. Prepare final report of DISCOM as per the scope of work and as per the regulation of Energy Audit, 2021, in a standard format duly indexed, covering profile of the unit and its details of energy related data w.r.t. DISCOMs Sector, analytical & Statistical details and any other relevant information.

METHODOLOGY

In order to meet requirements of the scope of Work, CEEP, adopted the following phase wise approach for completion of the assignment

Phase 1 – Pre-audit phase

a. Kick off meeting with DISCOM officials.

The following were the agenda during the kick off meeting.

- Introduction of the team
- Briefing of energy audit – Schedule of plan & execution
- Discussion about data collection format.
- Discussion on the scope of energy audit

After detailed deliberations following points were discussed.

- TCED will provide the transportation facility for the field measurement.
- TCED will provide a single person of contact for the energy audit assistance who has access to the T Soft (TCED internal software).
- TCED will provide an engineer in the field who has knowledge on the distribution lines

b. Assigning of team members.
c. Collection and Review of the energy related data

Phase 2 – Audit phase

Field survey:

a. The field survey had been conducted for HT lines and transformers of the designated area as representative data for compiling a comprehensive and diligent assessment.

b. A detail route plan of the distribution network had been also ascertained by way of segmenting data through walk down surveys along 11kV incoming feeder and corresponding 11kV feeders were also surveyed.

c. Hourly load analysis was done for all the six feeders and feeder energy meters were calibrated against the power analyzer.

d. HT lines & Transformers are mapped using the Global positioning system (GPS).

e. HT line length and partial LT line length were identified using the GPS.

f. The consumption data, type of cable, transformer details etc were collected from the DISCOM and verified with the field data.

g. Analysis of various types of losses in the system was done. Various losses in the system are as listed below.

Technical Losses:

- HT (11 kV) line losses
- Distribution transformer losses (Iron & Copper losses).
- L.T. Line losses
- HT and LT cable losses

Miscellaneous technical losses

- Losses due to lose jump connections in the line
- Losses due to short circuits & earth faults Losses in service mains of installations.
- Losses incurred in CT'S of energy meters.
- Losses incurred in old static energy meters.

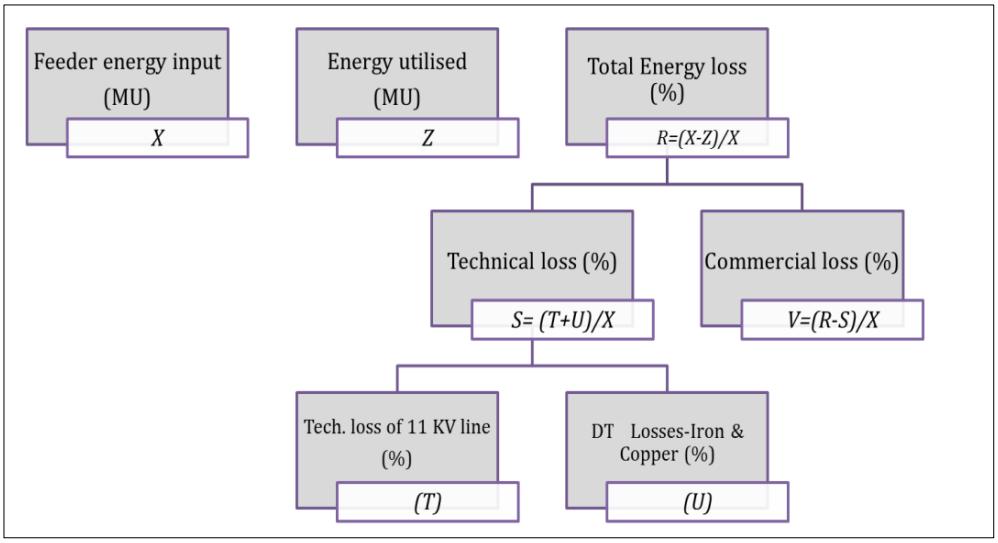

Figure 25: Schematic representation of technical losses

Commercial losses

- Mistakes in the billing.
- Meters not recording (MNR)
- Meters not recording correctly
- Meters bye passed due to defects/ intentionally.
- Meters not read & billed.
- Theft and pilferage.

Phase 3 – Post audit phase

After the identification of various loss reduction initiatives based on the HT & LT distribution detailed analysis was carried out in this phase of the study to prepare a strategy for loss reduction. Under this strategy, detailed steps are defined for loss measurement, energy audit and loss verification as well. A Final Report was prepared after discussion with TCED officials. Submitted the report with complete database and techno economic analysis.

CALCULATIONS INVOLVED IN LOSS ANALYSIS

Technical losses occur in the system due to cables, overhead lines, transformers and other equipment in the substation. The losses in cables and overhead lines depends on the length, type of the cable/overhead line as well as the current passing through it.

The length of the overhead lines could be determined after mapping HT/LT lines and transformers using GPS and the type of overhead line was identified. The type of HT/LT cables, its length, were collected during the field visit. The energy consumption pattern during the previous 12 months for all HT consumers and LT consumers (under each distribution transformer) were analyzed and average monthly energy consumption was noted.

A. LT Losses

For LT side, the average monthly energy consumption is noted (at the transformer secondary side). The **LT overhead line losses** are calculated as per the formula given below

$$LT\ line\ losses\ per\ month\ \left(\frac{kWh}{month}\right) = 3I_L^2 * R_L * d * 24 * 30 \ldots\ldots\ldots\ldots\ (1)$$

Where: I_L = average value of current passing through the LT overhead line (A)

R_L = Resistance/km of the LT overhead line (Ω/km)

d = mean length of the LT overhead line (km)

The value of I_L can be calculated from the total average monthly kWh consumption of all consumers under a single Distribution Transformer as per the following equation

$$I_L = \frac{Total\ Average\ monthly\ kWh\ consumption\ under\ each\ Distribution\ Transformer\ (\frac{kWh}{month})*1000}{\sqrt{3}*400*24*30} \ldots\ldots\ldots\ldots(2)$$

Now, Energy transmitted from the pole of the distribution transformer (DT) is given by

$$Energy\ transmitted\ from\ the\ pole\ of\ DT\ \left(\frac{kWh}{month}\right) =$$
$$Total\ energy\ consumption\ under\ each\ DT\ (\frac{kWh}{month}) + LT\ line\ losses\ (\frac{kWh}{month}) \ldots\ldots\ldots\ldots\ldots\ldots(3)$$

LT cable line losses are calculated as follows:

$$LT\ cable\ losses\ per\ month\ \left(\frac{kWh}{month}\right) = \frac{3I_c^2*R_c*d*24*30}{1000} \quad \ldots\ldots\ldots\ldots(4)$$

Where: I_c = average value of current passing through the LT cable (A)

R_c = Resistance/km of the LT cable (Ω/km)

d = length of the LT cable (km)

The value of $I_{c\ can}$ be calculated from the total average monthly energy transmitted from the pole of each Distribution Transformer as per the following equation

$$I_c = \frac{Total\ Average\ monthly\ energy\ transmitted\ from\ pole\ of\ each\ Distribution\ Transformer\ (kWh/month)*1000}{\sqrt{3}*400*24*30} \text{.....(5)}$$

Now, the energy at the secondary side of each distribution transformer is given by

$$Energy\ at\ the\ secondary\ side\ of\ each\ DT\ \left(\frac{kWh}{month}\right) = Total\ energy\ transmitted\ from\ pole\ of\ each\ DT\ \left(\frac{kWh}{month}\right) + LT\ cable\ losses\ \left(\frac{kWh}{month}\right) \text{.....(6)}$$

B. Transformer losses

The major losses in a transformer are accounted as Core losses and Copper losses. Core losses are independent of the transformer loading whereas Copper losses depends on the loading factor. The transformer losses are given by the formula as

$$Transformer\ losses\ \left(\frac{kWh}{month}\right) = \frac{(P_{core}+x^2*P_{Cu})*24*30}{1000} \text{.....(7)}$$

Where: P_{core} = Transformer core losses (W)

P_{Cu} = Transformer Copper losses (W)

x, Transformer loading factor = Total average monthly Energy at the transformer secondary (kWh/month)/ (Average monthly Power Factor* Transformer capacity in kVA)

Thus, the total energy transmitted the HT side of each distribution transformer is given by the equation

$$Total\ average\ monthly\ energy\ transmitted\ from\ the\ transformer\ primary\ \left(\frac{kWh}{month}\right) = Average\ monthly\ energy\ transmitted\ from\ the\ transformer\ secondary\ \left(\frac{kWh}{month}\right) + Transformer\ losses\ \left(\frac{kWh}{month}\right) \text{.....(8)}$$

C. HT losses

For HT consumers the average monthly energy at the transformer HT side is available and the HT overhead line loss was calculated as per follows:

$$\text{HT line loss per month}\ \left(\frac{\text{kWh}}{\text{month}}\right) = 3I^2 * R * D * 24 * 30 \text{.....(9)}$$

Where: I = average value of current passing through the overhead line (A)

R = Resistance/km of the HT overhead line (Ω/km)

D = length of the overhead line (km)

The value of average current is found from the average monthly energy consumption recorded at the HT side as $I = \frac{average\ monthly\ kWh\ recorded\ at\ HT\ metering\ side}{24*30*11*\sqrt{3}}$ ……..(10)

For LT consumers under distribution transformer the energy transmitted from the HT side of each distribution transformer is calculated as per equation (9)

$$Total\ \ monthly\ average\ energy\ transmitted\ from\ the\ pole\ at\ switching\ station\ \left(\frac{kWh}{month}\right) = Total\ monthly\ average\ energy\ transmitted\ from\ the\ transformer\ primary\ \left(\frac{kWh}{month}\right) + Total\ monthly\ average\ HT\ overhead\ line\ losses\ \left(\frac{kWh}{month}\right)\ \ldots\ldots\ldots\ldots\ldots\ldots\ldots(11)$$

HT Cable losses is given by equation (12) as follows

$$HT\ cable\ losses\ \left(\frac{kWh}{month}\right) = 3\ I_T^2 * R_{HTcable} * D_c * 24 * 30\ \ldots\ldots\ldots\ldots\ldots(12)$$

Where: I_T = average current through the HT cable (A)

$R_{HTcable}$ = Resistance/km of HT cable (Ω/km)

D_c = length of HT Cable from incomer to Pole at switching station

The total monthly average energy transmitted from the feeder incomer =

$$The\ total\ monthly\ average\ energy\ transmitted\ from\ the\ feeder\ incomer\ (kWh/month) = Total\ monthly\ average\ energy\ transmitted\ from\ the\ pole\ at\ switching\ station + HT\ cable\ losses$$

D. Feeder Meter Calibration

Continuous logging was done at each feeder for a period of 24 hours during a normal working day. The energy transmitted from each feeder was recorded using power analyzer and it is compared against the power analyzer readings. Percentage of error in the feeder side energy meter was found using the formula shown below.

$$\%\ of\ error = \frac{(Feeder\ energy\ meter\ reading - Power\ analyser\ reading\ ) * 100}{Power\ analyser\ reading}$$

LIST OF INSTRUMENTS

The instruments used for the measurements and analysis as a part of electrical distribution audit were as follows:

Table 90: Equipment list

Equipment/software name	**Make**	**Model**	**Purpose**
Portable load manager	Krykard	1. ALM 31 2. CA8345	Load and distribution loss analysis, Meter deviation
Global positioning system meter	Garmin	Etrex 10	For mapping the HT lines and to have the coordinates of the transformers
Easy GPS software			For mapping the co-ordinates
Google maps			For mapping

4. INFRASTRUCTURE DETAILS

The infrastructure details of the TCED DISCOM are given below as per the Performa filled out and verified by the accredited energy auditor.

Table 91: Infrastructure details

Form-Details of Input Infrastructure					
1	**Parameters**	**Total**	**Covered during in audit**	**Verified by Auditor in Sample Check**	**Remarks (Source of data)**
i	Number of circles	1	1	1	
ii	Number of divisions	1	1	1	
iii	Number of sub-divisions	1	1	1	
iv	Number of feeders	18	18	18	100% of the Total feeder
v	Number of DTs	495	495	495	100% of the total DT. Transformers of HT consumers excluded in the list
vi	Number of consumers	42995	42995	42995	100% of the total consumers
2	**Parameters**	**66kV and above**	**33kV**	**11/22kV**	**LT**
a. i.	Number of conventional metered consumers	-	-	-	8130
ii	Number of consumers with 'smart' meters	-	-	-	-
iii	Number of consumers with 'smart prepaid' meters	-	-	-	-
iv	Number of consumers with 'AMR' meters	-	-	-	-
v	Number of consumers with 'non-smart prepaid' meters	-	-	138	34687
vi	Number of unmetered consumers	-	-		
vii	**Number of total consumers**	-	-	138	42817
b.i.	Number of conventionally metered Distribution Transformers	-	-	-	343
ii	Number of DTs with communicable meters	-	-	-	-
iii	Number of unmetered DTs	-	-	-	152
iv	**Number of total Transformers**				495

c.i.	Number of metered feeders			-	
ii	Number of feeders with communicable meters			18	
iii	Number of unmetered feeders			-	
iv	**Number of total feeders**			18	
d.	Line length (ct km)		4.20	119.13	287.95
e.	Length of Aerial Bunched Cables			1.88	-
f.	Length of Underground Cables		2.57	75.25	4.53

5. ELECTRICAL DISTRIBUTION SYSTEM

Thrissur is known as the cultural capital of Kerala and it is the administrative capital of Thrissur district. Thrissur is known as the cultural capital of Kerala because of its cultural, spiritual and religious leanings throughout history. It is famous for Thrissur Pooram festival, one of the most colourful and spectacular temple festivals of Kerala from ancient times. Thrissur has been politically, economically and culturally significant to the Indian subcontinent. The city is built around a 65-acre (26 ha) hillock called the Thekkinkadu Maidanam. Thrissur was once the capital of the Kingdom of Cochin and was a point of contact for Arabs, Romans, Portuguese, Dutch and English.

The Thrissur Municipal Corporation manages the distribution of electricity to the residents and Commercial establishments through **Thrissur Corporation Electricity Department.** The distribution network covers about 12.65 Sq. km. Thrissur Corporation Electricity Department (TCED is one of the 10 electricity distribution Licensees in the state of Kerala. The present TCED has 40000 plus consumer strength and the annual energy sale is about 175 MU. TCED has its own 110 kV, 66 kV and 33KV substations with 495 distribution transformers. **Thrissur Corporation is unique in that it is the only local body engaged in the distribution of electricity and aims to become an ideal licensee in India.**

With the support and consent of various govt agencies, TCED has been implementing various programs and projects for efficient use of energy and conservation. TCED has already commissioned 500 kW Solar Power plant, and orientates at more solar plants near future. In addition, TCED will soon be having its own Small Hydel Projects as much as 4 projects are already allotted to TCED by the Kerala Government.

TCED has not availed any funding so far under central support and missed modernisation and strengthening under APDRP, RAPDRP and IPDS.

Presently, as of December 2024, **TCED came under the RDSS and implementing all the required measures as per the Regulations of Energy accounting**. AT& C loss & Revenue gap for TCED is below bench marks but for an area currently handled by TCED this figure is high due to non-segregation of loss data which will be covered in Smart meter program under the RDSS with system metering.

The billing system, ERP covering Material/Procurement, Accounts and HR are missing and more importantly this utility does not have any GIS mapping of consumers and indexing them to Feeder/DTR/Consumer that enable clear energy auditing. This will be covered under IT- enabled system.

As far as KSERC filing is concerned, TCED has equal responsibility as that of other licensees within the state and compliance to variance regulations and statutory filings are mandatory and these reforms now suggested are just for these requirements only and is expected that KSERC will concur for such investment appraisals.

ELECTRICAL NETWORK CONFIGURATION

The Thrissur Corporation Electricity Department (TCED) receives power at two supply voltage:

1. 110 kV – receives at Aswini substation.
2. 66 kV – receives at Aswini Substation

The However, the Thrissur Corporation Electricity Department (TCED) have three substations in the name of its voltage level.

1. 110 kV substation at Aswini.
2. 66 kV substation at Aswini.
3. 33 kV substation at Ikkandawarrior Road.

The supply receives at 110 kV and stepdown to 11 kV feeders using 2 nos of 12.5 MVA transformers installed in the yard. Another 110-kV bus is passed through the 01 no of 16 MVA transformer to stepdown at 33 kV voltage and transmitted to 33 KV substation. In the 33-kV substation 02 nos of 5 MVA transformer will stepdown the supply to 11 kV and supplies to the feeders.

The supply that receives at 66 kV gets stepdown using 2 nos of 10 MVA transformers installed in the yard.

SUBSTATION DETAILS

- ***TRANSFORMER AND FEEDER DETAILS – SUBSTATION***

Transformer details in each substation is given in the table below:

Table 92: Substation transformer details

S/s	TR. No	Capacity of Transformer	Voltage level	Current	Volt impedance	Serial No.	MFD Name	Date of MFD
		MVA	KV	A	%			
66 kV	TR-1	10	66/11	87.5/525	9.57	120285-1	TELK	1988
	TR-2	10	66/11	87.5/525	9.71	120285-2	TELK	1989
	TR-3	10	66/11	87.6/525	9.97	120495	TELK	2005
110 kV	TR-1	12.5	110/11	65.7/657	10.21	120553-1	TELK	2008
	TR-2	12.5	110/11	65.7/657	10.12	120553-2	TELK	2008
	TR-3	16	110/33	84.1/280	10.31	120554	TELK	2008
33 kV	TR-1	5	33/11	87.6/263	7.14	110125-1	TELK	2009
	TR-2	5	33/11	87.6/263	7.01	110125-2	TELK	2009

There are 07nos of 11 kV feeders during the FY 2024-25 period under the 110-kV substation, 07 in 66 kV and 4 in 33 kV substation. The feeders are:

Table 93: Distribution Feeder name

Feeder			
33 kV s/s		**110 kV s/s**	
1	Paravattani	1	M O Road
2	Koorkanchery	2	Kottappuram
3	Veliyanoor	3	East Fort
4	Mission Quarters	4	Shornur Road
66 kV s/s		5	District Hospital
1	Keralavarma	6	Chembukavu
2	Poonkunnam	7	Vanjikulam
3	Bini		
4	Vivekodayam		
5	Aranattukkara		
6	Jubilee Mission Medical College		
7	Ramanilayam		

- ***DETAILS OF CABLES AND OVERHEAD LINES - SUMMARY***

The details of 11 kV cable used at the substation is given below. The data was taken from the Single line diagram of the substation.

Table 94: Switching Station – 11 kV UG Cable Details

From	To	Cable size	Run	Core	Cable length (m)	R/km (ohm)
110/11 kV TRFR	Substation panel	500 sqmm XLPE	3	3	50	0.081
66/11 kV TRFR	Substation panel	500 sqmm XLPE	3	3	50	0.081
33/11 kV TRFR	Substation panel	300 sqmm XLPE	1	3	50	0.081
Substation panel -110/11 kV	M O Road	300 sqmm XLPE	1	3	30	0.13
	Kottappuram	300 sqmm XLPE	1	3	30	0.13
	Vanjikulam	300 sqmm XLPE	1	3	30	0.13
	Chembukavu	300 sqmm XLPE	1	3	30	0.13
	Shornur Road	300 sqmm XLPE	1	3	30	0.13
	District Hospital	300 sqmm XLPE	1	3	30	0.13
	East Fort	300 sqmm XLPE	1	3	25	0.13
Substation panel -66/11 kV	Poonkunnam	300 sqmm XLPE	1	3	50	0.13
	Keralavarma	300 sqmm XLPE	1	3	50	0.13
	Bini	300 sqmm XLPE	1	3	65	0.13
	Vivekodayam	300 sqmm XLPE	1	3	30	0.13
	Aranattukkara	300 sqmm XLPE	1	3	50	0.13
	Jubilee Mission Medical College	300 sqmm XLPE	1	3	30	0.13
	Ramanilayam	300 sqmm XLPE	1	3	30	0.13
Substation panel -33/11 kV	Paravattani	300 sqmm XLPE	1	3	30	0.13
	Koorkanchery	300 sqmm XLPE	1	3	65	0.13
	Veliyanoor	300 sqmm XLPE	1	3	30	0.13
	Mission Quarters	300 sqmm XLPE	1	3	30	0.13

The details of OH lines used in the TCED distribution system is given in the table below. The HT line length was measured using the GPS mapping.

Table 95: TCED Distribution –line details

Sl. No	Feeder	HT							
		OH Line Length	UG Cable length						
			95 mm²	150 mm²	185 mm²	240 mm²	300 mm²	400 mm²	ABC - 120 mm²
		m	m	m	m	m	m	m	m
1	Mission Quaters	4507		139	77	31	4809	39	
2	Veleyannor	1,493			138	32	3,921		
3	Koorkenchery	3,182		130	232	266	3,358		
4	Paravattany	3,163		272	111		4,908		34
5	Aranattukara	4,079				214	5,714		12
6	JMC						2,811		
7	Vivekodhaya m	2,141		40	124	86	2,814		23
8	Bini	1,850		63	122	354	1,259		19
9	Poonkunam	2,239		230	378		3,920		
10	Keralavarma	2,981		157	238	123	5,651		28
11	Ramanilayam	1,811		878	221		891		
12	M O Road	1,731	170	209	480	266	4,885		26
13	Kottapuram	2,512		63	455		3,175		
14	Chembukkavu	3,435			170	409	2,286		14
15	Shornur Road	2,118		572	301		4,011		
16	DH	2,350		497	67	256	4,659		
17	East Fort	2,119		73	77		4,725	56	
18	Vanjikulam	2,173		164	310	185	1,973		1,728
Total		**43884**	**170**	**3486**	**3503**	**2221**	**65769**	**95**	**1884**

➢ ***TRANSFORMER DETAILS – FEEDER WISE***

The details of Transformers in each feeder wise that has been audited under the DISCOM is summarized and listed below in table. **The detailed list is provided in the Annexure.**

Table 96: Feeder wise transformer data - Summary

Sl No	Feeder	No: of Transformer	DTR Meter	
			Yes	No
1	Mission Quarters	32	29	3
2	Veliyanoor	19	13	6
3	Koorkenchery	23	17	6
4	Paravattani	25	19	6
5	Arnattukkara	33	27	6
6	Jubilee Mission	Dedicated feeder HT		
7	Vivekodhayam	22	12	10
8	Bini	17	10	7
9	Poonkunam	36	23	13
10	Keralavarma	38	23	15
11	Ramanilayam	19	11	8
12	M O Road	31	20	11
13	Kottappuram	40	32	8
14	Chembukavu	25	18	7
15	Shornur Road	44	27	17
16	District Hospital	34	18	16
17	East Fort	29	22	7
18	Vanjikulam	28	22	6
	Total	**495**	**343**	**152**

6. POWER PURCHASE DETAILS

POWER ALLOCATION

The State Government of Kerala allocates the energy available from various sources among the state DISCOM's to ensure balanced financial viability and fairly uniform tariff for various categories of consumers in different parts of the state. The allocation is also to ensure payment of power purchase cost including transmission and other related expenses. The point of connection charges shall be paid by DISCOM proportionate to energy allocation of each source. The TCED has only single source of power – KSEBL – which is owned and operated by the Kerala State Government. The power purchase capacity of the TCED as per the Power purchase agreement is 09 MW.

AVERAGE BILLING RATE (ABR):

ABR for a consumer category is determined by dividing total expected revenue from the category by total expected sale to that category. Mathematically, it can be represented as:

$$ABR\ of\ a\ category\ of\ consumer = \frac{Total\ Expected\ revenue\ from\ a\ category}{Total\ Sale\ of\ power\ to\ that\ category}$$

The ABR (Average rate /kWh) of each category is not made available during the period of audit. The net average rate/unit is given as **Rs 10.05/kWh**.

Note: There is no tariff subsidy for the DISCOM consumers as per the KSERC regulations

AVERAGE POWER PURCHASE COST PER UNIT

Average per unit cost power purchase for a consumer category is determined by dividing total unit purchase cost from the category by total input purchase in units. Mathematically, it can be represented as:

$$APC\ of\ a\ category\ of\ consumer = \frac{Total\ Purchase\ cost\ from\ a\ category}{Total\ input\ purchase\ units}$$

The net average power purchase cost per unit of the DISCOM is available from the Trueing up document and summarised in the table below. However, the data for FY 2024-25 is calculated value from the electricity purchase and could vary after the trueing up.

Table 97: Average purchase cost – DISCOM

FY	Total input energy purchased (MU)**	Total purchase cost (Rs lakhs)	APC (Rs/unit)
2020-21	129.33	8878.8	6.86
2021-22	137.59	9502	6.9
2022-23	159.12	11,632.97	7.31
2023-24	178.98	13399.61	7.49
2024-25	182.489	13948.29	7.64

***Total input energy purchased (MU) = Input energy (MU) at the DISCOM from 110 kV, 66kV incomer & solar export energy billed excluding solar own generation by DISCOM.*

ACS – ARR GAP ANALYSIS

The Average cost of supply (ACS) and the average revenue realised (ARR) is conducted in the DISCOM during the energy audit and summarized in the below table and chart.

Table 98: ACS- ARR gap

	Input energy (MU)**	Total expenditure (Rs in lakhs)	Total revenue (Rs)	ACS (Rs/kWh)	ARR (Rs/kWh)	ACS - ARR gap (Rs/kWh)
2020-21	129.33	13615.48	13230.11	10.53	10.23	-0.3
2021-22	137.59	11,702.32	10,913.60	8.51	7.93	-0.57
2022-23	159.12	13,649.41	14,193.08	8.58	8.92	-0.34
2023-24	178.98	15,201.46	15,737.38	8.49	8.79	-0.30
2024-25[6]	NIL					

***Total input energy purchased (MU) = total Input energy (MU) at the DISCOM substation and solar export energy billed excluding solar own generation by DISCOM.*

- ***Source**: Audited balance sheet and financial year statement 2023-24*

[6] *Data not availed during the period of audit.*

7. SINGLE LINE DIAGRAM

110 KV & 66 KV SUBSTATION

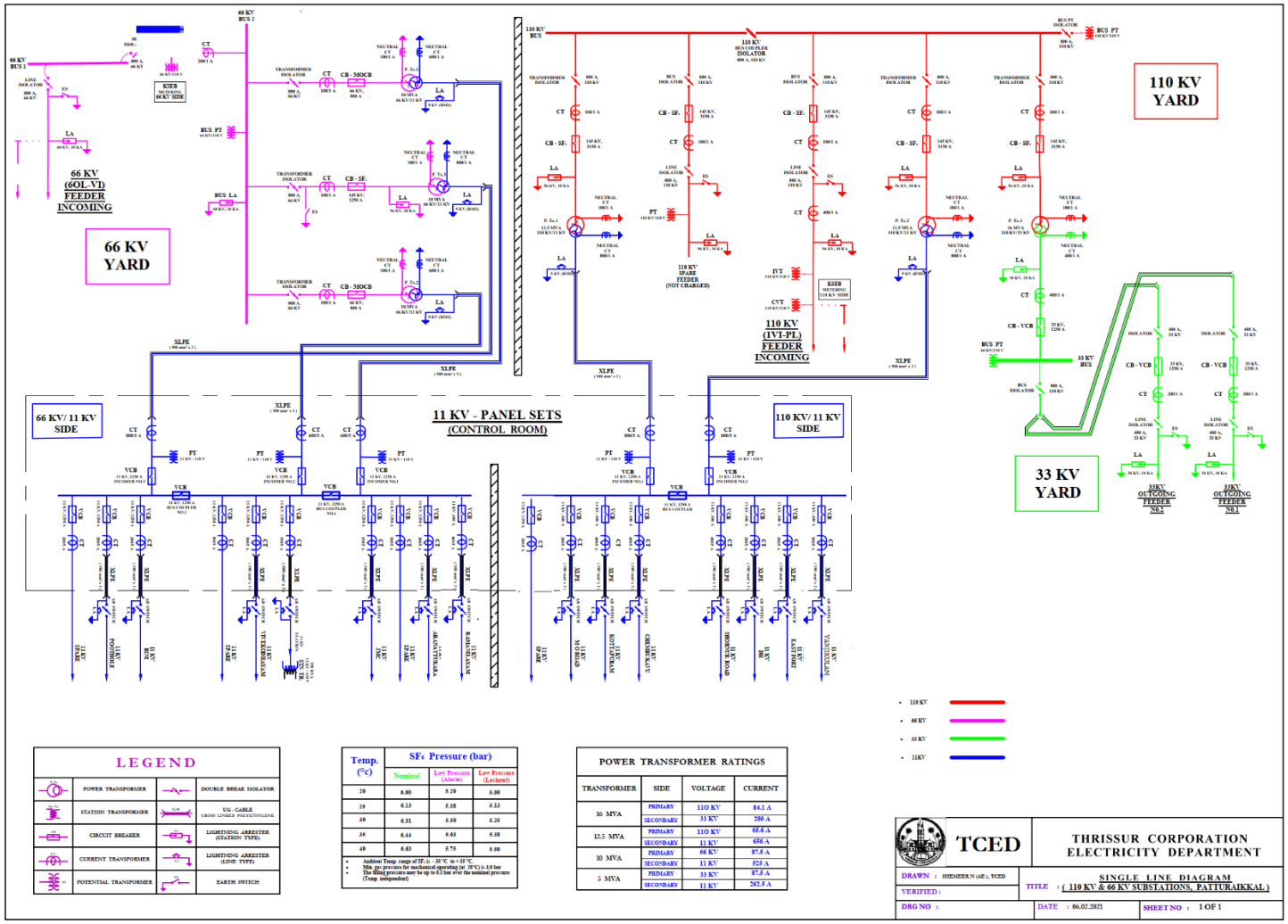

Figure 26: 110 kV & 66 kV substation

33 KV SUBSTATION

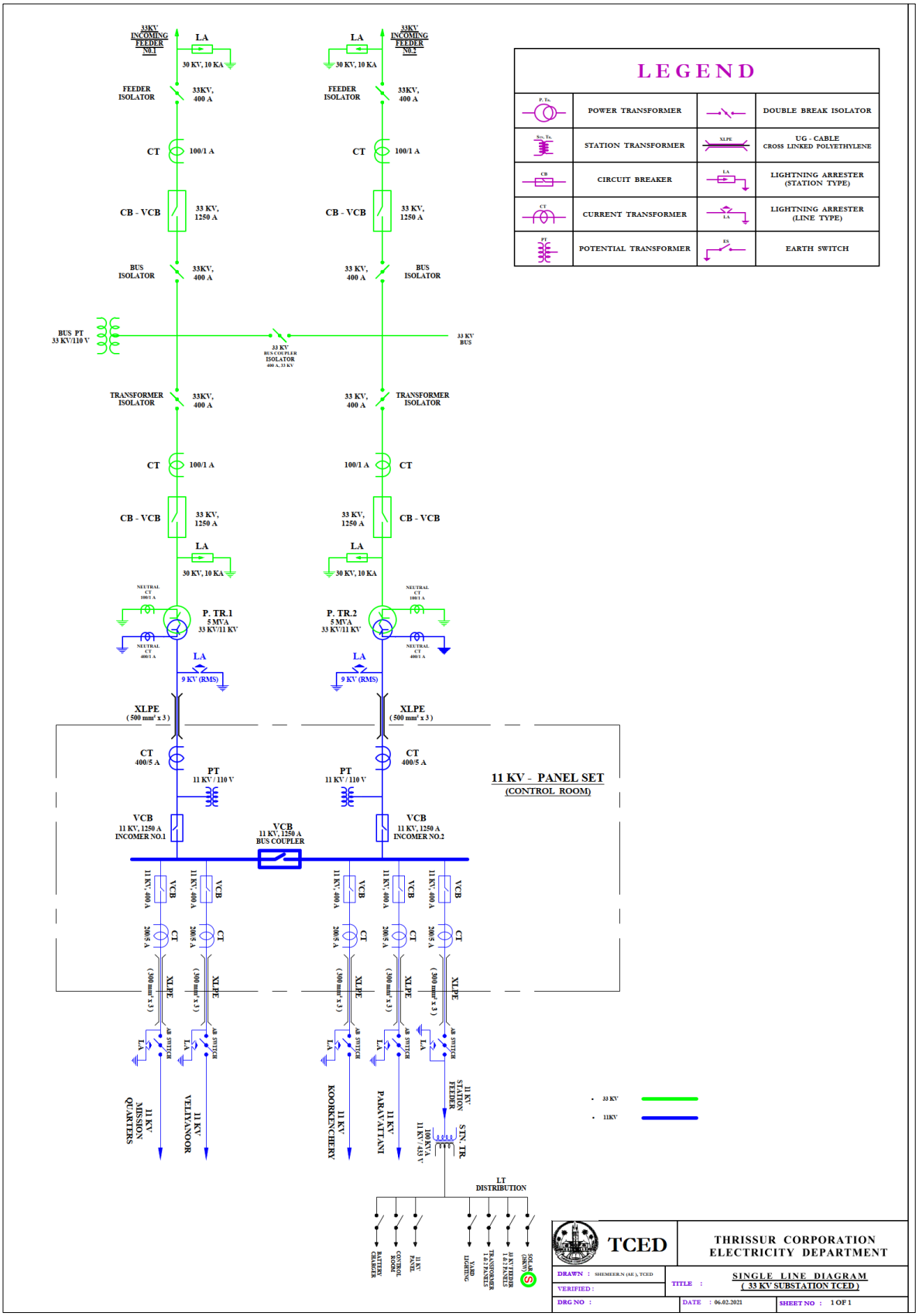

Figure 27: 33 kV substation

8. CATEGORY OF SERVICE DETAILS

DETAILS OF CONSUMERS AND CONSUMPTION

The details of consumers and consumption is given in the table below:

Table 99: Details of consumers and consumption

Summary of Energy						
Period from 1st April 2023 to 31st March 2024						
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	0.415	23,211	47.611	
2	Commercial	LT	0.415	16,495	54.741	
3	IP Sets					
4	Hor. & Nur. & Coffee/Tea & Rubber (Metered)					
5	Hor. & Nur. & Coffee/Tea & Rubber (Flat)					
6	Heating and Motive Power					
7	Water Supply					
8	Public Lighting	LT	0.415	364	1.275	VIII B
9	HT Water Supply					
10	HT Industrial	HT	11	5	0.962	HT IA
11	Industrial (Small)	LT	0.415	485	3.544	LT IV
12	Industrial (Medium)					
13	HT Commercial	HT	11	94	27.949	HT 4A, 4B, SPS
14	Applicable to Government Hospitals & Hospitals					
15	Lift Irrigation Schemes/Lift Irrigation Societies					
16	HT Res. Apartments Applicable to all areas					
17	Mixed Load - own consumption					
18	Government offices and department	LT	0.415	2,084	17.636	
19	HT general	HT	11	39	22.050	HT 2A, 2B
20	Agriculture	LT	0.415	178	0.048	LT V
	Total			**42,955**	**175.817**	

DIVISION WISE STATUS OF DT LEVEL METERING

The division wise status of DT level metering is given in the table below.

Table 100: Division wise status of DT level metering

a. Division wise status of DT level metering										
Zone name	Circle name	Division name	Feeder name	Total no of DT on feeder	No of unmetered DTs	No of metered DTs			No. of DTs with functional meters	
						AMR metered (communicable)	AMI metered (communicable)	Non-AMR / AMI metered (non-communicable)	Communicating (Total No out of 7 and 8)	Non-communicating (Total No. out of 7,8 and 9)
1	2	3	4	5= (6+7+8+9)	6	7	8	9	10	11
TCED	TCED		Mission Quarters	32	5		27		27	
TCED	TCED		Veliyanoor	19	9		10		10	
TCED	TCED		Koorkenchery	23	7		16		16	
TCED	TCED		Paravattani	25	8		17		17	
TCED	TCED		Arnattukkara	33	15		18		18	
TCED	TCED		Jubilee Mission	Dedicated HT feeder						
TCED	TCED		Vivekodhayam	22	8		14		14	
TCED	TCED		Bini	17	6		11		11	
TCED	TCED		Poonkunam	36	23		13		13	
TCED	TCED		Keralavarma	38	16		22		22	
TCED	TCED		Ramanilayam	19	9		10		10	
TCED	TCED		M O Road	31	16		15		15	
TCED	TCED		Kottappuram	40	0		40		40	
TCED	TCED		Chembukavu	25	4		21		21	
TCED	TCED		Shornur Road	44	15		29		29	
TCED	TCED		District Hospital	34	18		16		16	
TCED	TCED		East Fort	29	11		18		18	
TCED	TCED		Vanjikulam	28	11		17		17	

DETAILS OF DT WISE LOSSES

The details of DT wise losses as per the Performa is given in the table below.

Table 101: DT wise losses

b. Details of DT-wise losses													
Sub-station ID	**Feeder ID**	**Feeder Name**	**DT Id no**	**DT Capacity (kVA)**	**Predominant consumer type of DT (Domestic/Industrial/ Agriculture /Mixed)**	**Type of metering (Unmetered/AMI /AMR /Other)**	**Status of meter (functional/non-functional)**	**% of data received automatically (if AMI/AMR)**	**No. of connected consumers**	**Input Energy (MU)**	**Billed Energy (MU)**	**Loss of Energy (MU)**	**% Loss**
		1	**2**						**3**	**4**	**5**	**6 = 4-5**	**(7) = [(6)/(4)]*100**
Not available as 100% DT metering not done also the DT measurement not yet commenced													

Note: The DT level input energy is not recorded by the DISCOM that results in non-evaluation of DT level losses.

9. FIELD VERIFICATION DATA

ENERGY & POWER QUALITY ANALYSIS – AT SWITCHING STATION

The objective of this section is to establish how the facility is performing in terms of energy consumption and the quality of power at the switching station.

- **Incomer 110 KV – Measurement Evaluation**

The continuous power measurement of incomer feeder (110 kV) conducted using the Krykard ALM 31 power quality analysers. The incomer side was logged for 5 hours and measured data is summarized in the following table. The measurement-averaging period was 01 Minutes. The measurement was done on 26th June 2025.

The summary of measured parameters of the transformer is given in the table below.

Table 102: Incomer Measurement Data

Incomer Name		Incomer 110 kV
Date of measurement		26th June 2025
Basic Parameters		
Parameters	**Units**	**Incomer 110 kV**
Voltage line (kV)	Min	110.1
	Avg	111.9
	Max	114.1
Current (A)	Min	64.8
	Avg	76.99
	Max	87.6
Frequency (Hz)	Min	49.83
	Avg	49.99
	Max	50.18
Energy Parameters		
Parameters	**Units**	**Incomer 110 kV**
Energy consumed (kWh)	Total	80129
Energy received (kVAh)	Total	81521.7
Power factor		0.98
Active power (kW)	Min	12481.9
	Avg	14702.6
	Max	16397.2
Apparent power (kVA)	Min	12741.2
	Avg	14958.1
	Max	16616.2
Reactive power (kVAr)	Min	2730.5
	Avg	3244.7
	Max	3751.9
Power quality parameters		
Parameters	**Units**	**Incomer 110 kV**
Voltage imbalance %	Min	0.1
	Avg	0.2

	Max	0.3
Current imbalance %	Min	1.1
	Avg	1.75
	Max	2.6
THDv %	Min	1
	Avg	1.4
	Max	1.8
THDa %	Min	2.2
	Avg	3.06
	Max	4.1

➢ Electrical Parameters – Profile

- **Power variations – Incomer**

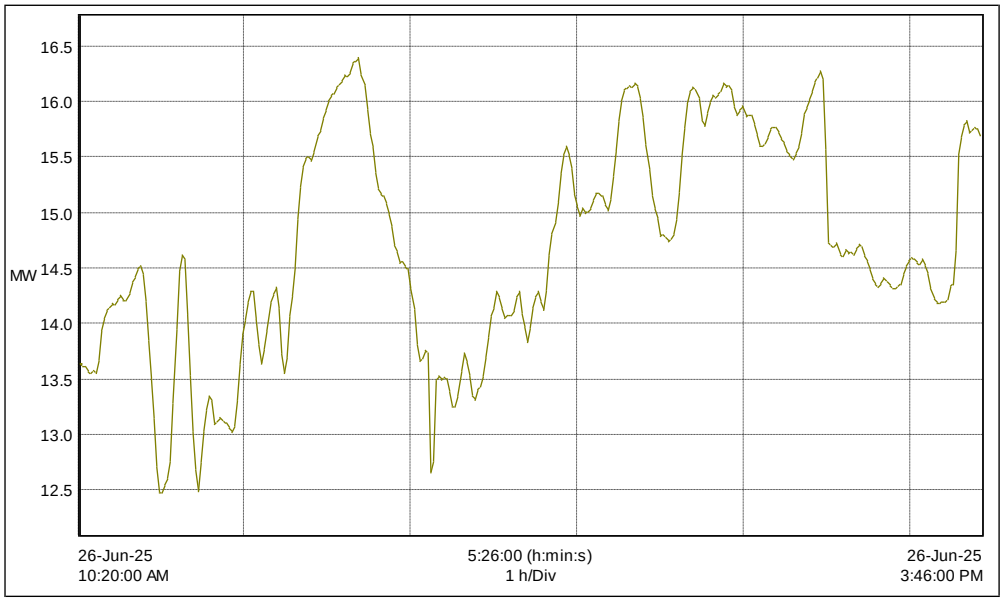

Figure 28: Power variations – continuous logged data

- **Demand variations – incomer**

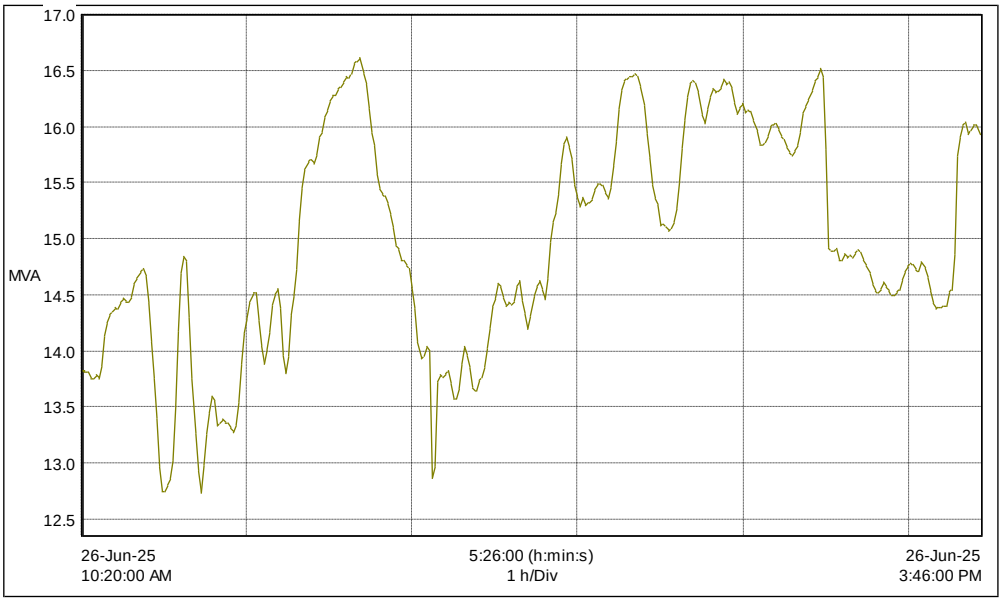

Figure 29: Demand variations – continuous logged data

- **Power factor variations - Incomer**

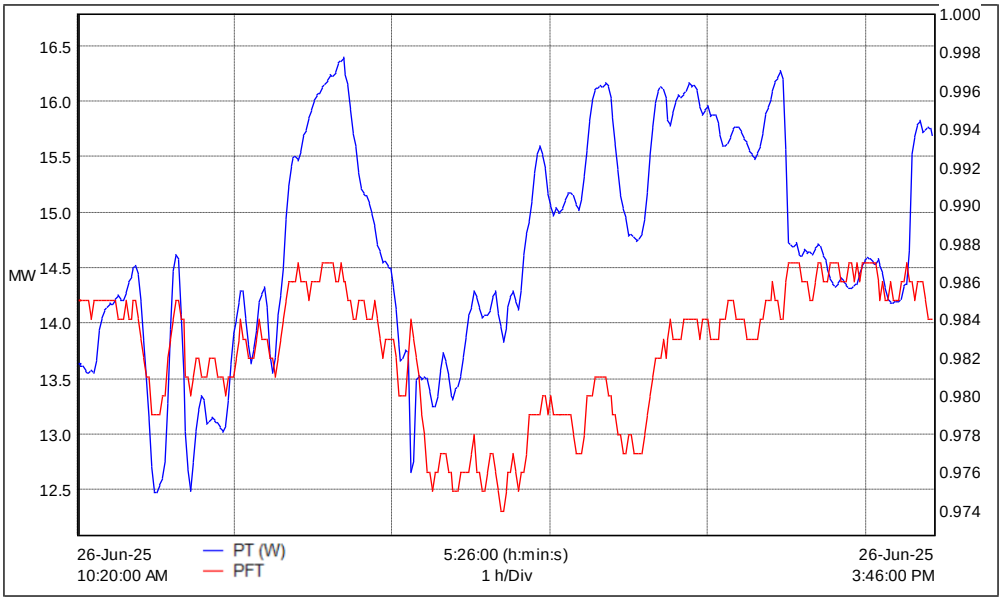

Figure 30: Power factor – variations

- **Power quality**

Harmonics study revolves around the use of non-linear loads that are connected to electric power systems including static power converters, arc discharge devices, saturated magnetic devices and to a lesser degree, rotating machines. Static power converters of electric power are the largest non-linear loads and are used in industry for a variety of purposes such as electro- chemical power supplies, adjustable speed drives, and uninterruptible power supplies.

Classification, effects and standards are given in tables below.

TABLE 103: HARMONICS CLASSIFICATION

	1st order	2nd order	3rd order	3rd order	4th order	5th order	6th order
Frequency Hz	50	100	150	200	250	300	350
Sequence	+	-	0	+	-	0	+

Table 104: CURRENT HARMONICS LIMIT (IEEE 519-2014)

Maximum harmonic current distortion in percent of I_L						
Individual harmonic order (odd harmonics)[a, b]						
I_{SC}/I_L	$3 \le h < 11$	$11 \le h < 17$	$17 \le h < 23$	$23 \le h < 35$	$35 \le h \le 50$	TDD
< 20[c]	4.0	2.0	1.5	0.6	0.3	5.0
$20 < 50$	7.0	3.5	2.5	1.0	0.5	8.0
$50 < 100$	10.0	4.5	4.0	1.5	0.7	12.0
$100 < 1000$	12.0	5.5	5.0	2.0	1.0	15.0
> 1000	15.0	7.0	6.0	2.5	1.4	20.0

[a]Even harmonics are limited to 25% of the odd harmonic limits above.

[b]Current distortions that result in a dc offset, e.g., half-wave converters, are not allowed.

[c]All power generation equipment is limited to these values of current distortion, regardless of actual I_{sc}/I_L.

where

I_{sc} = maximum short-circuit current at PCC

I_L = maximum demand load current (fundamental frequency component) at the PCC under normal load operating conditions

Table 105: VOLTAGE HARMONICS LIMIT (IEEE 519-2014)

Voltage distortion limits		
Bus voltage at PCC	**Individual voltage distortion %**	**Total voltage harmonics distortion %**
V ≤ 01 kV	5.0	8.0
01 kV < V ≤ 69 kV	3.0	5.0
69.001 kV < V ≤ 161 kV	1.5	2.5
161.001 kV and above	1.0	1.5

Thus, harmonic limits at the TCED 110 kV incomer is given in the table below:

Table 106: Standard limits as per the IEEE 519-2014 – at TCED incomer

2. Normal range of Isc/I_L at TCED incomer	-	<20
3. Maximum standard Total demand distortion – current	-	5%
4. Maximum standard Total harmonic distortion – voltage	-	2.5%

Harmonic values at the TCED incomer are given in the table below:

Table 107: Harmonics values – TCED incomer

Particulars	THDv max	THDa max	Remarks
	%	%	
Permissible limit	**2.5**	**5**	
Incomer 110 kV	2	4	within limits
Incomer 66 kV	NA	NA	Not able to measure

- **Harmonic spectrum**

Voltage harmonic spectrum:

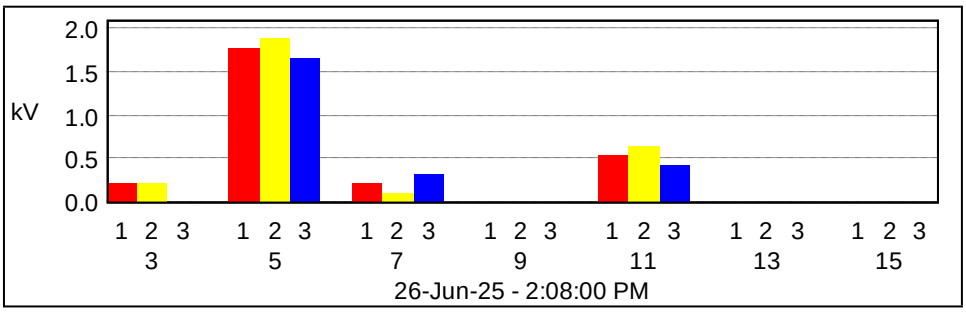

Figure 31: Voltage harmonic spectrum

Current harmonic spectrum:

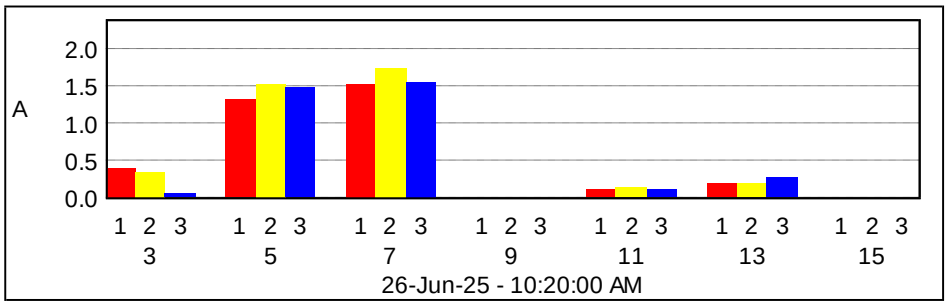

Figure 32: Current harmonic spectrum

OBSERVATIONS AND RECOMMENDATION – ELECTRICAL NETWORK CONFIGURATION

Table 108: Observations & recommendation – electrical network configuration

Observation	Recommendation	Benefit
Incomer measurement evaluation		
• Real time Demand variation shows that the maximum demand registered at normal period (12:01 pm) and it was 16.61 MVA. • The high demand in the normal period is due to the effect of commercial buildings in the DISCOM area, mainly due to the Air conditioning loads in those buildings.	• Nil	• Nil
Energy & power quality analysis		
• The measured per day consumption through the 110-kV s/s approx. is 0.352 MU.	• The current THD values are within the IEEE 519 standard limit (<5%). • The voltage THD values are within the IEEE 519 standard limit (<2.5%)	• Nil

PICTURES

General photos

110 KV substation

110 kV substation

10. LIST OF DOCUMENTS VERIFIED WITH EACH PARAMETER

The following are the documents verified during Annual Energy Audit:

Table 109: List of Documents verified

FY 2024-25 Data Verification		
Sl No	**Name**	**Name Supporting Document**
Input Energy		
1	Input Energy (MU)	Electricity bill of FY April 2024-March 2025 from KSEBL and Consumer bills
Feeder wise Losses		
2	Feeder wise Energy Accounting	TCED software
3	No of connection metered (Nos)	TCED software
4	No of connection Unmetered (Nos)	TCED software
5	Connected Load Metered (MW)	TCED software
6	Connected Load Unmetered (MW)	TCED software
7	Input Energy (MU)	KSEB bill and TCED software for solar export data
8	Metered energy (MU)	TCED software
9	Unmetered energy/Assessment Energy (MU)	TCED software
10	T&D Losses (MU)	Manual calculation
11	Collected Amount	TCED billing software
12	AT&C Loss	TCED software
Details of Input Energy Sources		
13	Generation at Transmission Periphery (Details)	KSEB bill and TCED software for solar export data
14	Embedded Generation in DISCOM Area	TCED software - solar export data

11. DETAILED FORMATS TO BE ANNEXED

BALANCE SHEET – FY 2024-25

TCED (From 1 April 2024)
THRISSUR

Balance Sheet
1-Apr-24 to 31-Mar-25

Liabilities		TCED (From 1 April 2024) as at 31-Mar-25	Assets	TCED (From 1 April 2024) as at 31-Mar-25
Capital Account		**515852308.99**	**Fixed Assets**	**296983331.44**
Loans (Liability)			**Current Assets**	**1757564534.69**
Current Liabilities		**943221169.64**		
Consumer Contribution		**88717842.93**		
Excess of income over expenditure		**506756544.57**		
Opening Balance	*423194992.39*			
Current Period	*83561552.18*			
Total		**2054547866.13**	**Total**	**2054547866.13**

Figure 33 :Balance sheet – FY 2024-25

Source: *Submitted Truing up FY 2024-25*

PROFIT & LOSS STATEMENT – FY 2024-25

TCED (From 1 April 2024)
THRISSUR

Income and Expenditure Statement
1-Apr-24 to 31-Mar-25

Particulars	TCED (From 1 April 2024) 1-Apr-24 to 31-Mar-25	Particulars	TCED (From 1 April 2024) 1-Apr-24 to 31-Mar-25
Opening Stock		Sales Accounts	1602823167.69
Purchase Accounts	1399392223.80	Indirect Incomes	97966737.20
Indirect Expenses	217836128.91	Closing Stock	
Excess of income over expenditure	*83561552.18*		
Total	1700789904.89	Total	1700789904.89

Figure 34:Profit & loss statement

***Source**: submitted Truing up FY 2024-25*

ELECTRICITY BILL – KSEBL – 110 KV INCOMER

KERALA STATE ELECTRICITY BOARD LIMITED

Office of the Special Officer(Revenue), Pattom,Thiruvananthapuram

DEMAND CUM DISCONNECTION NOTICE FOR APRIL 2025

(As per CHAPTER VII OF KERALA ELECTRICITY SUPPLY CODE -2014)

Cons#	1236680102381	Bill Date	**11-Apr-2025**	Due Date	**21-Apr-2025**	DC Date	**06-May-2025**	Bill.No	11028112205351 Ver : 0		
LCN	21/1029&21/T	Tariff	Licensee: ThrissurCorporation			CD	113495625	BG	113495625		

THRISSUR CORPORATION ELECTRICITY DEPARTMENT
ELECTRICITY DEPARTMENT,CORPORATION OFFICE,
PATTURACKAL,
Thrissur,,680002
Mobile no--9446143072

SBI Virtual A/c No(IFS Code:SBIN0070493)-null

Multiple Reading Billing

Consumer GSTIN_ID- /KSEB (L)GST ID=32AAECK2277NBZ1
TDS u/s 194Q : 131811.91

Arrears as on 28-Feb-2025			
Disputed	0	Undisputed	220148

Contract Demand(kVA)	75% of CD (KVA)	130% of CD (KVA)	Connected Load (KW)
45000.0	33750.0	58500.0	0

Date of Previous Reading	28-Feb-2025	electricitydepartment@yahoo.co.in	
Date of Present Reading	31-Mar-2025	Supply Voltage	110 kV EHT
Average		Billing Type	Non-DPS
MD (kVA) / Consumption (kWh) / PF		Section	110 KV Sub Station,Viyyur
35320.48 / 15350867 / 0.97		Circle	Transmission Circle,

Reading Details of meter MAIN METER 110kV-Working (KVA,KWh,KVAh & KVArh) for 03-2025

1. Energy Consumption(KWh)

Zone	FR	IR	MF	Units
1	0.00	0.00	200.000	9607400
2	0.00	0.00	200.000	3356000
3	0.00	0.00	200.000	4391000
			Total	17354400

2. Energy Consumption(KVAh)

Zone	FR	IR	MF	Units
1	0.00	0.00	200.000	9971600
2	0.00	0.00	200.000	3448600
3	0.00	0.00	200.000	4495400
			Total	17915600
Ave.PF=KWh/KVAh			0.97	

3. Energy Consumption(KVArh) Lag and kVARh (Lead)

Zone	FR	IR	MF	Units	FR	IR	Units
1	0.00	0.00	200.000	2659400	0.00	0.00	0
2	0.00	0.00	200.000	788400	0.00	0.00	0
3	0.00	0.00	200.000	947200	0.00	0.00	0
			Total kVArh(Lag)	4395000	kVArh(Lead)		0

4. Demand (KVA)

	Readings	MF	Units
1	90.503	200.000	38008.0
2	69.198	200.000	35090.0
3	49.802	200.000	25770.0
5.Factory Lighting			0.0
6.Colony Lighting			0.0
7.Generator			0

INVOICE

	Unit	Rate	Amount (Rs)
1.Total Demand Charge			
a. Demand Charge	38008.0	415.000	15773320.00
b.	0.0	415.000	0.00
c.	0.0	415.000	0.00
d. Excess Demand Charge	0	207.500	0.00
e.		207.500	0.00
f.		207.500	0.00
Sub Total (a+b+c+d+e+f)			**15773320.00**
2.Total Energy Charges			
a. Energy charges	17354400	6.75000	117142200.00
b.		10.1250	0.00
c.		5.06250	0.00
Sub Total(a+b+c)			**117142200.00**
3.PF Incentive / Disincentive			-1171422.00
Total Energy Charge			**115970778.00**
4.Energy Charges on Lighting load			
a.Factory Lighting	0	0.1	
b.Colony Lighting	0	0.1	0.00
Sub Total(a+b)			
5.Electricity Duty	117142200	0.100	
6.Ele. Surcharge (*)	17354400	0.025	
7.Duty on self generated energy	0	0.15	0.00
8.Penalty for non-segn. of light load			

		Amount
9.Other Charges		
Meter Rent		1000.00
Central GST Amount@9%		0.00
State GST Amount@9%		0.00
Reconnection Fee		0.00
Kerala Flood Cess		0.00
Green Energy Charge		66814.44
10.Total(add 1 to 9)		**131811912.44**
Plus/Minus (Round off)		-0.44
UnDisputed Arr Amount		220148.00
Less	1. Advance / Credit	
	2. CD Interest	0.00
	3. CD/Oth Ref	0.00
Net Payable		**132032060.00**

(Rupees Thirteen Crore Twenty Lakh Thirty Two Thousand Sixty Only)

E & O.E

Balance Advance at Credit, if any

1.As per Regulation 130 of Kerala Electricity Supply Code 2014 any complaint regarding accuracy of a bill shall be first taken up with the officer designated to issue the bill (Special Officer(Revenue)). For Enquiry,please contact:0471 2514323,2514262 Please follow our official Facebook page fb.com/ksebl for information &announcements.(Please see the instructions overleaf)

2.The connection will be disconnected without further notice,if the amount is not remitted on or before the DC date above

(*): Charged as per Section 3 of The Kerala State Electricity Surcharge (Levy and Collection) Act,1989

SPECIAL OFFICER (REVENUE)

Please Detach and enclose with the DD

1236680102381 **11028112205351** **Rs.132032060.00**

THRISSUR CORPORATION ELECTRICITY DEPARTMENT

DD/Payment Instruction | Name of the | Date D D M M Y Y Y Y | Signature

ELECTRICITY BILL – KSEBL – 66 KV INCOMER

KERALA STATE ELECTRICITY BOARD LIMITED

Office of the Special Officer(Revenue), Pattom,Thiruvananthapuram

DEMAND CUM DISCONNECTION NOTICE FOR OCTOBER 2024

(As per CHAPTER VII OF KERALA ELECTRICITY SUPPLY CODE -2014)

Cons#	1336680002662	Bill Date	**08-Oct-2024**	Due Date	**15-Oct-2024**	DC Date	**30-Oct-2024**	Bill.No	11028112146847 Ver : 0
LCN	21/1029	Tariff	Licensee: ThrissurCorporation			CD	47577920	BG	47577920

ASSISTANT SECRETARY, THRISSUR CORPORATION
ELECTRICITY DEPARTMENT, CORPORATION OFFICE,
THRISSUR,
THRISSUR,,680001
Mobile no--9446143072

SBI Virtual A/c No(IFS Code:SBIN0070493)-KSEBHT21C1029

Consumer GSTIN_ID- 32AAALT1623J1Z7/KSEB (L)GST ID=32AAECK2277NBZ1
TDS u/s 194Q : 44073.3

Arrears as on 31-Aug-2024			
Disputed	0	Undisputed	445819

Contract Demand(kVA)	75% of CD (KVA)	130% of CD (KVA)	Connected Load (KW)
8000.0	6000.0	10400.0	0

Date of Previous Reading	31-Aug-2024	electricitydepartment@yahoo.co.in	
Date of Present Reading	30-Sep-2024	Supply Voltage	66 kV EHT

Average				
MD (kVA)	Consumption (kWh)	PF	Billing Type	Non-DPS
16171.17	6449100	0.97	Section	110 KV Sub Station,Viyyur
			Circle	Transmission Circle,

Reading Details of meter KSEB0000021"-Working (KVA,KWh,KVAh & KVArh) for 09-2024

1. Energy Consumption(KWh)

Zone	FR	IR	MF	Units
1	1143603.00	1126761.00	200.000	3368400
2	372175.00	366603.00	200.000	1114400
3	499569.00	493109.00	200.000	1292000
			Total	5774800

2. Energy Consumption(KVAh)

Zone	FR	IR	MF	Units
1	1197296.00	1179923.00	200.000	3474600
2	386740.00	381043.00	200.000	1139400
3	525801.00	519175.00	200.000	1325200
			Total	5939200

Ave.PF=KWh/KVAh 0.97

3. Energy Consumption(KVArh) Lag and kVARh (Lead)

Zone	FR	IR	MF	Units	FR	IR	Units
1	350882.	346636.	200.000	849200	200.00	200.00	0
2	103520.	102334.	200.000	237200	0.00	0.00	0
3	159506.	158046.	200.000	292000	11.00	11.00	0
			Total kVArh(Lag)	1378400	kVArh(Lead)		0

4. Demand (KVA)	Readings	MF	Units
1	70.884	200.000	14176.8
2	63.02	200.000	12604.0
3	41.18	200.000	8236.0
5.Factory Lighting			0.0
6.Colony Lighting			0.0
7.Generator			0

INVOICE

	Unit	Rate	Amount (Rs)
1.Total Demand Charge			
a. Demand Charge	14177.0	400.000	5670800.00
b.	0.0	400.000	0.00
c.	0.0	400.000	0.00
d. Excess Demand Charge	0	200.000	0.00
e.		200.000	0.00
f.		200.000	0.00
Sub Total (a+b+c+d+e+f)			**5670800.00**
2.Total Energy Charges			
a. Energy charges	5774800	6.65000	38402420.00
b.		9.97500	0.00
c.		4.98750	0.00
Sub Total(a+b+c)			**38402420.00**
3.PF Incentive / Disincentive			0.00
Total Energy Charge			**38402420.00**
4.Energy Charges on Lighting load			
a.Factory Lighting	0	0.1	
b.Colony Lighting	0	0.1	0.00
Sub Total(a+b)			
5.Electricity Duty	38402420	0.100	
6.Ele. Surcharge (*)	5774800	0.025	
7.Duty on self generated energy	0	0.15	0.00
8.Penalty for non-segn. of light load			

		Amount
9.Other Charges		
Reconnection Fee		0.00
Charges for Belated Payments		78.00
Green Energy Charge		0.00
10.Total(add 1 to 9)		**44073298.00**
Plus/Minus (Round off)		0.00
UnDisputed Arr Amount		445819.00
Less 1. Advance / Credit		
2. CD Interest		0.00
3. CD/Oth Ref		0.00
Net Payable		**44519117.00**

(Rupees Four Crore Forty Five Lakh Nineteen Thousand One Hundred Seventeen Only)

E & O.E

Balance Advance at Credit, if any

1.As per Regulation 130 of Kerala Electricity Supply Code 2014 any complaint regarding accuracy of a bill shall be first taken up with the officer designated to issue the bill (Special Officer(Revenue)). For Enquiry,please contact:0471 2514323,2514262. Please follow our official Facebook page fb.com/ksebl for information &announcements.(Please see the instructions overleaf)

2.The connection will be disconnected without further notice,if the amount is not remitted on or before the DC date above

(*): Charged as per Section 3 of The Kerala State Electricity Surcharge (Levy and Collection) Act,1989

SPECIAL OFFICER (REVENUE)

Please Detach and enclose with the DD

1336680002662 **11028112146847** **Rs.44519117.00**

ASSISTANT SECRETARY, THRISSUR CORPORATION

DD/Payment Instruction | Name of the | Date D D M M Y Y Y Y | Signature

MONTHLY ENERGY BILL DETAILS – FY 2024-25

Table 110: Energy bill summary – FY 2024-25- 110 kV incomer

CONSUMER	**THRISSUR COPRATION ELECTRICITY DEPARTMENT**					**SUPPLY VOLTAGE**		**110KV/EHT**	**CONSUMER NO:**		**LCN :21/THR.CORP**		
Month	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Average
75% OF CD	-	-	-	-	-	-	-	-	-	33,750	33,750	33,750	
kVA Normal	24,780	19,880	18,840	20,620	24,740	19,960	20,500	20,900	19,400	33,607	34,346	38,008	24,632
kVA Peak	21,720	18,240	16,940	17,960	21,260	18,980	18,940	20,200	19,020	32,779	32,318	35,090	22,787
kVA Off Peak	17,480	12,020	11,520	12,080	17,200	12,860	12,420	12,980	12,340	22,089	24,170	25,770	16,077
CONTRACT DEMAND CHARGE	99,12,000	79,52,000	75,36,000	82,48,000	98,96,000	79,84,000	82,00,000	83,60,000	79,88,677	1,40,06,250	1,42,53,590	1,57,73,320	1,00,09,153
KWH NORMAL	59,61,400	48,87,600	44,39,600	43,67,800	54,72,400	49,32,800	46,81,000	49,48,000	47,88,800	80,83,800	77,98,400	96,07,400	58,30,750
KWH PEAK	20,55,400	17,40,800	15,90,800	15,14,000	18,34,800	17,80,400	17,13,000	17,93,600	17,71,200	29,64,800	28,45,400	33,56,000	20,80,017
KWH OFF-PEAK	30,08,000	19,88,800	18,27,400	18,07,000	24,39,600	20,49,200	20,00,600	21,06,400	20,19,200	34,84,000	35,21,800	43,91,000	25,53,583
TOTAL KWH	**1,10,24,800**	**86,17,200**	**78,57,800**	**76,88,800**	**97,46,800**	**87,62,400**	**83,94,600**	**88,48,000**	**85,79,200**	**1,45,32,600**	**1,41,65,600**	**1,73,54,400**	**1,04,64,350**
KWH CHARGE	**7,33,14,920**	**5,73,04,380**	**5,22,54,370**	**5,11,30,520**	**6,48,16,220**	**5,82,69,960**	**5,58,24,090**	**5,88,39,200**	**5,77,92,080**	**9,80,95,050**	**9,56,17,800**	**11,71,42,200**	**7,00,33,399**
PF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PF INCENTIVE/PENALTY	-	-	-	-	-	-	-	-	-	-9,80,951	-9,56,178	-11,71,422	
METER RENT	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
CENTRAL GST	90	90	90	90	90	-	90	-	-	-	-	-	45
STATE GST	90	90	90	90	90	-	90	-	-	-	-	-	45
OTHERS	1	173	58,332	24,807	6,641	1	3,021	4,685	589	55,951	54,538	2,86,962	41,308
GRAND TOTAL	**8,32,28,101**	**6,52,57,733**	**5,98,49,882**	**5,94,04,507**	**7,47,20,041**	**6,62,54,961**	**6,40,28,291**	**6,72,04,885**	**6,57,82,346**	**11,11,77,300**	**10,89,70,750**	**13,20,32,060**	**7,98,25,905**

Table 111: Energy bill summary – FY 2024-25- 66 kV incomer

CONSUMER	TCED		SUPPLY VOLTAGE		66KV/EHT		CONSUMER NO:		LCN :21/1029	
	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	**Average**
kVA Normal	19,916	19,420	15,660	14,483	13,372	14,177	16,168	17,883	14,514	16,177
kVA Peak	17,927	16,324	14,136	13,095	11,990	12,604	14,219	12,738	13,549	14,065
kVA Off Peak	11,621	11,292	8,695	8,127	7,470	8,236	8,240	7,940	8,695	8,924
CONTRACT DEMAND CHARGE	79,66,400	77,68,000	62,64,000	57,93,200	53,48,800	56,70,800	64,67,200	71,53,200	59,03,967	64,81,730
KWH NORMAL	44,71,200	42,98,400	36,15,200	34,06,400	34,16,800	33,68,400	35,86,800	36,11,800	34,64,000	36,93,222
KWH PEAK	14,65,600	13,22,200	11,86,200	11,07,000	11,16,800	11,14,400	11,63,200	11,50,600	11,93,000	12,02,111
KWH OFFPEAK	19,86,200.00	16,65,800.00	13,73,800.00	12,25,000.00	12,63,200.00	12,92,000.00	13,34,800.00	13,50,600.00	13,67,600.00	14,28,778
TOTAL KWH	79,23,000	72,86,400	61,75,200	57,38,400	57,96,800	57,74,800	60,84,800	61,13,000	60,24,600	63,24,111
KWH CHARGE	5,26,87,950	4,84,54,560	4,10,65,080	3,81,60,360	3,85,48,720	3,84,02,420	4,04,63,920	4,06,51,450	4,05,85,743	4,21,13,356
PF	0.97	0.97	0.96	0.97	0.97	0.97	0.97	0.97	0.97	0.97
OTHERS	1,04,494	1,65,171	-20,17,965	2,66,499	3,10,500	4,45,897	48,926	95,858	1,43,684	-48,548
GRAND TOTAL	6,07,58,844	5,63,87,731	4,53,11,115	4,42,20,059	4,42,08,020	4,45,19,117	4,69,80,046	4,79,00,508	4,66,33,394	4,85,46,537

MINUTES OF THE MEETING

തൃശ്ശൂർ കോർപ്പറേഷൻ
വൈദ്യുതി വിഭാഗം
ഓഫീസ് കുറിപ്പ്

06.07.2025ന് രാവിലെ 11ന്നുള്ള തൃശ്ശൂർ കോർപ്പറേഷനിലെ FY 2024-25 Annual Energy Audit report സംബന്ധിച്ചുള്ള യോഗത്തിന്റെ minutes

പങ്കെടുത്തവർ:-

1. Krishna Kumar N.K. AS.
2. ഗ്ലാഡ്സ്. ടി. എസ്
3. സുനിൽകുമാർ വി.എ. CEEP (Sector expert)
4. ബിനിത EA TCED
5. ASHOK K.M.P EA CEEP
6. Keerthana K

1. സമയ കാലതാമസം KSEB Bulk Bill, Pending Up DoC, Bill Collection Data, Annual Financial Data എന്നിവ ലഭ്യമാക്കുന്നതിനു വേണ്ടപ്പെട്ട ഉദ്യോഗസ്ഥർ തിരുത്തൽ വരുത്തുന്നതിനു തീരുമാനിച്ചു.
2. നിലവിലെ installation map കൂടുന്നതിനു section-തിൽ നിന്നും manpower വേണം ലഭ്യമാക്കാൻ CEEP പ്രതിനിധി ആവശ്യപ്പെട്ടു.
3. Energy Manager-ന് നിന്നും Quarterly Performance ലഭ്യമാക്കാൻ അറിയിച്ചു.
4. S/S-ൽ നിന്നും feeder wise data ലഭ്യമാക്കാൻ അറിയിച്ചു.

യോഗം 12ന്നു അവസാനിച്ചു

SIGNED PERFORMA FY 2024-25

- **General information**

General Information					
1	**Name of the DISCOM**	THRISSUR CORPORATION ELECTRICITY DEPARTMENT (TCED)			
2	**i) Year of Establishment**	1937			
	ii) Government/Public/Private	GOVERNMENT			
3	**DISCOM's Contact details & Address**				
i	City/Town/Village	THRISSUR			
ii	District	THRSSUR			
iii	State	KERALA		Pin	680001
iv	Telephone	0487-2422470		Fax	
4	**Registered Office**				
i	Company's Chief Executive Name	N K KRISHNAKUMAR			
ii	Designation	ASSISTANT SECRETARY			
iii	Address	THRISSUR CORPORATION ELECTRICITY DEPARTMENT, MO ROAD			
iv	City/Town/Village	THRISSUR		P.O.	680001
v	District	THRISSUR			
vi	State	KERALA		Pin	680001
vii	Telephone	0487-2422470		Fax	
5	**Nodal Officer Details***				
i	Nodal Officer Name (Designated at DISCOM's)	JOSE TS			
ii	Designation	ELECTRICAL ENGINEER			
iii	Address	TCED, THRISSUR CORPORATION ELECTRICITY DEPARTMENT, MO ROAD			
iv	City/Town/Village	THRISSUR		P.O.	680001
v	District	THRISSUR			
vi	State	KERALA		Pin	680001
vii	Telephone	0487-2423559		Fax	
6	**Energy Manager Details***				
i	Name	B NIKHIL			
ii	Designation	ASSISTANT ENGINEER		Whether EA or EM	EA
iii	EA/EM Registration No.	EA-24811			
iv	Telephone			Fax	
v	Mobile	9037192013	E-mail ID	astced.lsgd@kerala.gov.in, tcedea@gmail.com	
7	**Period of Information**				
	Year of (FY) information including Date and Month	01-April 2024 to 31-March-2025			

- **Performance Summary of DISCOM – Form-1**

Performance Summary of Electricity Distribution Companies			
1	Period of Information Year of (FY) information including Date and Month (Start & End)	01-April 2024 to 31-March-2025	
2	**Technical Details**		
(a)	**Energy Input Details**		
(i)	Input Energy Purchase (From Generation Source)	Million kwh	188.189
(ii)	Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh	188.189
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh	175.82
(b)	Transmission and Distribution (T&D) loss Details	Million kwh	12.373
		%	6.57
	Collection Efficiency	%	98.81%
(c)	Aggregate Technical & Commercial Loss	%	7.68%

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Authorised Signatory and Seal

Name of Authorised Signatory

Name of the DISCOM:

Full Address:-

Signature:

Name of energy

Registration Number: FA 24811

ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION

Seal

N K KRISHNAKUMAR
ASSISTANT SECRETARY
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION
PEN - 743648
PH No: 8921037758

JOSE.T.S
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel:2423559

J Nagesh Kumar
Director/AEA 0133

Centre for Energy, Environment and Productivity
Plot No. 1039, 26th Street, H-Block,
Ponni Colony, Anna Nagar, Chennai - 600 040.
PH : 044 2616 3483, 9444882553

➢ Details of Division wise losses

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

Division Wise Losses — Period From Apr 2024 to Mar 2025

S.No	Name of circle	Circle code	Name of Division	Consumer category	Consumer profile: 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	Energy parameters: Input energy (MU)	Billed energy (MU): Metered energy	Unmetered/ assessment energy	Total energy	% of energy consumption	Losses: T&D loss (MU)	T&D loss (%)	Commercial Parameter: Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
1	TCED	TCED	TCED	Residential	23211	0	23211	54%	127.41	0	127.413	49.1%	188.189	47.61	0	47.61	27.08%	12.373	6.57%	34.62	34.50	99.65%	
				Agricultural	178	0	178	0.41%	0.42	0	0.423	0.2%		0.05	0	0.05	0.03%			0.03	0.03	86.67%	
				Commercial/Industrial-LT	19064	0	19064	44%	86.24	0	86.242	33.2%		75.92	0	75.92	43.18%			67.08	66.33	98.88%	
				Commercial/Industrial-HT	138	0	138	0.32%	44.49	0	44.491	17.1%		50.96	0	50.96	28.99%			32.53	32.48	99.85%	
				Others	364	0	364	1%	0.92	0	0.918	0.4%		1.28	0	1.28	0.73%			42.45	41.28	97.24%	
	Sub-total				**42955**	**0**	**42955**	**100%**	**259.49**	**0**	**259.49**	**100%**	**188.189**	**175.817**	**0**	**175.817**	**100%**	**12.373**	**6.57%**	**176.71**	**174.62**	**98.81%**	**7.68%**
2				Residential	0	0	0	0%	0	0	0	0%	0	0	0	0	0%	0	0%	0	0	0.00%	
				Agricultural	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-LT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Commercial/Industrial-HT	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
				Others	0	0	0	0%	0	0	0	0%		0	0	0	0%			0	0	0.00%	
	Sub-total				**0**	**0**	**0**	**100%**	**0**	**0**	**0**	**100%**	**0**	**0**	**0**	**0**	**100%**	**0**	**0%**	**0**	**0**	**0.00%**	**100%**
76	Total			Residential	23211	0	23211	54.04%	127.41	0	127.413	49.1%	188.189	47.61	0	47.61	27.08%	12.373	6.57%	34.62	34.50	99.65%	
				Agricultural	178	0	178	0.41%	0.423	0	0.423	0.2%		0.0484	0	0.0484	0.03%			0.03	0.03	86.67%	
				Commercial/Industrial-LT	19064	0	19064	44.38%	86.242	0	86.242	33.2%		75.92	0	75.92	43.18%			67.08	66.33	98.88%	
				Commercial/Industrial-HT	138	0	138	0.32%	44.491	0	44.491	17.1%		50.96	0	50.96	28.99%			32.53	32.48	99.85%	
				Others	364	0	364	0.85%	0.918	0	0.918	0.4%		1.28	0	1.28	0.73%			42.45	41.28	97.24%	
77	At company level				**42955**	**0**	**42955**	**100%**	**259.49**	**0**	**259.49**	**100%**	**188.189**	**175.817**	**0**	**175.817**	**100%**	**12.373**	**6.57%**	**176.71**	**174.62**	**98.81%**	**7.68%**

** 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.

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Authorised Signatory and Seal

Name of Authorised Signatory:

Name of the DISCOM:

Full Address:-

Seal

N K KRISHNAKUMAR
ASSISTANT SECRETARY
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION
PEN - 743648
PH No: 8921037758

JOSE T.S
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel:2423559

J Nagesh Kumar
Director/AEA 0133
Centre for Energy, Environment and Productivity
Plot No. 1039, 26th Street, H-Block,
Ponni Colony, Anna Nagar, Chennai - 600 040.
PH : 044 2616 3483, 9444882553

Signature:-
Name of Energy Manager: B NIKHIL
ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION
Registration Number: EA24811

➢ Details of 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	1	1	1	
iii	Number of sub-divisions	1	1	1	
iv	Number of feeders	18	18	18	
v	Number of DTs	495	495	495	18 feeders out of 18
vi	Number of consumers	42955	42955	42955	
2	**Parameters**	**66kV and above**	**33kV**	**11/22kV**	**LT**
a. i.	Number of conventional metered consumers	-	-	-	8130
ii	Number of consumers with 'smart' meters	-	-	-	-
iii	Number of consumers with 'smart prepaid' meters	-	-	-	-
iv	Number of consumers with 'AMR' meters	-	-	-	-
v	Number of consumers with 'non-smart prepaid' meters	-	-	138	34687
vi	Number of unmetered consumers	-	-		
vii	**Number of total consumers**	-	-	138	42817
b.i.	Number of conventionally metered Distribution Transformers	-	-	-	343
ii	Number of DTs with communicable meters	-	-	-	-
iii	Number of unmetered DTs	-	-	-	152
iv	**Number of total Transformers**				495
c.i.	Number of metered feeders			-	
ii	Number of feeders with communicable meters			18	
iii	Number of unmetered feeders			-	
iv	**Number of total feeders**			18	
d.	Line length (ct km)		4.20	119.13	287.95
e.	Length of Aerial Bunched Cables			1.88	-
f.	Length of Underground Cables		2.57	75.25	4.53
3	**Voltage level**	**Particulars**	**MU**	**Reference**	**Remarks (Source of data)**
i	66kV and above	Long-Term Conventional	182.489	Includes input energy for franchisees	
		Medium Conventional	0		
		Short Term Conventional	0		
		Banking	0		
		Long-Term Renewable energy	0		
		Medium and Short-Term RE	0		
		Captive, open access input	0		
		Sale of surplus power	0		
		Quantum of inter-state transmission loss	0		
		Power procured from inter-state sources	182.489		
		Power at state transmission boundary	182.489		
iii		**Input in DISCOM wires network**	182.489		
v	11 kV	Renewable Energy Procurement	0.420	Self generation = solar power plant in own buildings + 11 kV export received	
		Small capacity conventional/ biomass/ hydro plants	0.00		
		Sales Migration Input	0.00		
vi	LT	Renewable Energy Procurement	5.280	Total LT export	
		Sales Migration Input	0		

vii		**Energy Embedded within DISCOM wires network**	5.70		
viii		**Total Energy Available/ Input**	188.189		
4	**Voltage level**	**Energy Sales Particulars**	**MU**	**Reference**	
i	LT Level	DISCOM' consumers	124.86	Include sales to consumers in franchisee areas, unmetered consumers	Total Lt Sales
		Demand from open access, captive	0.00		
		Embedded generation used at LT level	5.282	Demand from embedded generation at LT level	
		Sale at LT level	124.86		
		Quantum of LT level losses	12.32	Included the LT OH line length, LT cable, Switch gear & Commercial losses	Manually calculated using distribution line length and feeder wise
		Energy Input at LT level	137.18		
ii	11 kV Level	DISCOM' consumers	50.96	Include sales to consumers in franchisee areas, unmetered consumers	
		Demand from open access, captive	0.00	Non DISCOM's sales	
		Embedded generation at 11 kV level used	0.423	Demand from embedded generation at 11kV	
		Sales at 11 kV level	50.96		
		Quantum of Losses at 11 kV	0.05	EHT + HT losses	distribution line length and feeder wise consumption
		Energy input at 11 kV level	51.01		
		Total Energy Requirement	**188.189**		
		Total Energy Sales	**175.817**		

Energy Accounting Summary

5	**DISCOM**	**Input (in MU)**	**Sale (in MU)**	**Loss (in MU)**	**Loss %**
i	LT	137.18	124.86	12.320	8.98
ii	11 Kv	51.01	50.961	0.053	0.10
iii	33 kv				
iv	> 33 kv				
	Loss Estimation for DISCOM				
	T&D loss (MU)	12.373			
	D loss (MU)	12.373			
	T&D loss (%)	6.57			
	D loss (%)	6.57			

J Nagesh Kumar
Director/AEA 0133

Centre for Energy, Environment and Productivity
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ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION

JOSE.T.S
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel:2423559

K KRISHNAKUMAR
ASSISTANT SECRETARY
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION
PEN - 743648
PH No: 8921037758

- **Form input energy**

Form-Input energy(Details of input energy & Infrastructure)

A. Summary of energy input & infrastructure

S.No	Parameters	Period From APR 2024 to MAR 2025	Remarks (Source of data)
A.1	Input Energy purchased (MU)	188.189	Electricity bill & solar export
A.2	Transmission loss (%)	0%	
A.3	Transmission loss (MU)	0	
A.4	Energy sold outside the periphery(MU)	0.00	
A.5	Open access sale (MU)	0	
A.6	EHT sale	0	
A.7	Net input energy (received at DISCOM periphery or at distribution point)-(MU)	188.189	Total net input
A.8	Is 100% metering available at 66/33 kV (Select yes or no from list)	Yes	
A.9	Is 100% metering available at 11 kV (Select yes or no from list)	Yes	
A.10	% of metering available at DT	69.29%	343 out of 495 transformers
A.11	% of metering available at consumer end	100%	
A.12	No of feeders at 66kV voltage level	0	
A.13	No of feeders at 33kV voltage level	0	
A.14	No of feeders at 11kV voltage level	18	
A.15	No of LT feeders level	0	Not available
A.16	Line length (ckt km) at 66kV voltage level	0	
A.17	Line length (ckt km) at 33kV voltage level	4.2	Measured through HT line mapping
A.18	Line length (ckt km) at 11kV voltage level	119.13	Measured through HT line mapping
A.19	Line length (km) at LT level	247.953	Measured through LT line mapping
A.20	Length of Aerial Bunched Cables	1.89	Measured through HT line mapping
A.21	Length of Underground Cables	82.34	Site measurement
A.22	HT/LT ratio	12.30	

B. Meter reading of input energy at injection points

S.No	Zone	Circle	Voltage Level (kV)	Division (KVA)	Sub-Division (KVA)	Feeder ID	Feeder Name	Feeder Metering Status (Metered/ unmetered/ AMD/AMR)	Status of Meter (Functional/Non-functional)	Metering Date: Date of last actual meter reading/ communication	Feeder Type (Agri/ Industrial/Mixed)	Status of Communication: % data received through automatically if feeder AMR	Number of hours when meter was unable to communicate in period	Total Number of hours in the period	Period From April 2024 to March 2025: Meter S.No	CT/PT ratio	Import (MU)	Export (MU)	Sales - MU	Remarks (Source of data)
B.1	TCED	TCED	110			21/Thrissur corp	VPL	Metered	Functioning	01-04-2025	Mixed	0	0	NA	K2065320	200/1	125.572	-	170.12	110 kV s/s
B.2	TCED	TCED	66			21/1029	OLVI	Metered	Functioning	01-04-2025	Mixed	0	0	NA	17052040	200/1	56.917	-		66 kV s/s
B.3	TCED	TCED	0.415			Multiple feeder	Multiple feeders	Metered	Functioning	01-04-2025	Mixed	0	0	NA			0.42		0.42	Consumer bills
B.4	TCED	TCED	11			Multiple feeder	Multiple feeders	Metered	Functioning	01-04-2025	Mixed	0	0	NA			5.28		5.28	Consumer bills
B.1001	Total (MU)																188.189	0.00	175.817	
B.1002	Net input energy at DISCOM periphery (MU)																188.189			

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Authorised Signatory and Seal

Name of Authorised Signatory

Name of the DISCOM:

Full Address:-

Seal

N K KRISHNAKUMAR
ASSISTANT SECRETARY
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION
PEN - 743648
PH No: 8921037758

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

N K KRISHNA ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION

JOSEY
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel 2443556

J Nagesh Kumar
Director/AEA 0133

Centre for Energy, Environment and Productivity
Plot No. 1039, 26th Street, H-Block,
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➢ Details of input energy sources

Details of Input Energy Sources

Period From Apr 2024 to Mar 2025

A. Generation at Transmission Periphery (Details)

S.No.	Name of Generation Station	Generation Capacity (In MW)	Type of Station Generation (Based- Solid (Coal ,Lignite)/Liquid/Gas/Renewable (biomass-bagasse)/Others)	Type of Contract (in years/months/days)	Type of Grid (Intra-state/Inter-state)	Point of Connection (POC) Loss MU	Voltage Level (At input)	Remarks (Source of data)
1	NIL							
2								

B. Embedded Generation in DISCOM Area

S.No	Name of Generation Station	Generation Capacity (In MW)	Tytpe of Station (Generation Based-Solid/Liquid/Gas/Renewable/Others)	Type of Contract	Type of Grid	Voltage Level (KV)	Circle Load (MW)	Received at Circle (KV)	Received at Circle (In MU)	Division Level Load (MW)	Received at Division Level (KV)	Received at Division Level (In MU)	Sub-Division Level Load (MW)	Received at Sub-Division Level (KVA)	Received at Sub-Division Level (In MU)	Remarks (Source of data)
1	Own generation	1.16	Renewable	Net metering	Renewable Source	11		11	0.420							Manual measurement - Excel sheet
2	From Prosumers	2.86	Renewable	Net metering	Renewable Source	0.415		0.415	5.280							Manual measurement - Excel sheet

JOSE.T.S
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel:2423569

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ELECTRICITY DEPARTMENT
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➢ Details of consumers and consumption

(Details of Consumers)						
Summary of Energy						
Period From APR 2024 to MAR 2025						
S.No	Type of Consumers	Category of Consumers (EHT/HT/LT/Others)	Voltage Level (kV)	No of Consumers	Total Consumption (In MU)	Remarks (Source of data)
1	Domestic	LT	0.415	23,211	47.611	LT 1A
2	Commercial	LT	0.415	16,495	54.741	
3	IP Sets					
4	Hor. & Nur. & Coffee/Tea & Rubber (Metered)					
5	Hor. & Nur. & Coffee/Tea & Rubber (Flat)					
6	Heating and Motive Power					
7	Water Supply					
8	Public Lighting	LT	0.415	364	1.275	VIII B
9	HT Water Supply					
10	HT Industrial	HT	11	5	0.962	HT IA
11	Industrial (Small)	LT	0.415	485	3.544	LT IV
12	Industrial (Medium)					
13	HT Commercial	HT	11	94	27.949	HT 4A,4B,SPS
14	Applicable to Government Hospitals & Hospitals					
15	Lift Irrigation Schemes/Lift Irrigation Societies					
16	HT Res. Apartments Applicable to all areas					
17	Mixed Load - own consumption					
18	Government offices and department	LT	0.415	2,084	17.636	
19	HT general	HT	11	39	22.050	HT 2A,2B
20	Agriculture	LT	0.415	178	0.048	LT V
21	Government offices and department					
22	Others-5 (if any , specify in remarks)					
23	Others-5 (if any , specify in remarks)					
24						
25						
	Total			42,955	175.817	

ASSISTANT ENGINEER
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➢ Details of Feeder wise losses

(Details of Feeder-wise losses)

Period From Apr 2024 to Mar 2025

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 feeder 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 Automatically (If feeder AMR/AMI)	Remarks
1	TCED						Mission Quarters	Urban	Others	11.07	10.55		4.63	5.76	nil	
2	TCED						Veliyannor	Urban	Others	9.23	8.55		7.40	8.50	nil	
3	TCED						Koorkenchery	Urban	Others	9.61	9.68		-0.70	0.50	nil	due to backfeeding
4	TCED						Paravattany	Urban	Others	9.89	9.57		3.30	4.46	nil	
5	TCED						Aranattukara	Urban	Others	13.69	12.73		6.99	8.10	nil	
6	TCED						JMC	Urban	Others	9.17	8.80		3.97	5.12	nil	
7	TCED						Vivekodhayam	Urban	Others	8.92	7.53		15.67	16.67	nil	
8	TCED						Bini	Urban	Others	7.58	6.81		10.07	11.14	nil	
9	TCED						Poonkunnam	Urban	Others	9.57	8.82		7.84	8.94	nil	
10	TCED						Keralavarma	Urban	Others	11.11	10.47		5.75	6.87	nil	
11	TCED						Ramanilayam	Urban	Others	9.35	8.10		13.41	14.44	nil	
12	TCED						M O Road	Urban	Others	12.43	11.89		4.35	5.49	nil	
13	TCED						Kottapuram	Urban	Others	7.32	6.67		8.89	9.98	nil	
14	TCED						Chembukkavu	Urban	Others	11.10	10.63		4.16	5.30	nil	
15	TCED						Shornur Road	Urban	Others	12.13	11.31		6.83	7.93	nil	
16	TCED						DH	Urban	Others	13.86	12.14		12.46	13.50	nil	
17	TCED						East Fort	Urban	Others	12.51	11.62		7.11	8.21	nil	
18	TCED						Vanjikulam	Urban	Others	8.87	8.55		3.52	4.67	nil	

J Nagesh Kumar
Director/AEA 0133

Centre for Energy, Environment and Productivity
Plot No. 1039, 26th Street, H-Block,
Ponni Colony, Anna Nagar, Chennai - 600 040.
PH : 044 2616 3483, 9444882553

JOSE.T.S
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel:2423559

ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION

N K KRISHNAKUMAR
ASSISTANT SECRETARY
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION
PEN - 743648
PH No: 8921037758

➢ Details of Subsidy

Consumer category (Separate for each subsidized consumer category)	Billed energy			Subsidized billed energy			Applicable rate of subsidy as notified by state govt		Subsidy due from state govt			Subsidy actually billed/claimed from state govt (as against col 12)	Subsidy received from state govt (As against col 13)	Balance subsidy yet to be received from state govt
	(in kWh)			(in kWh)			(in Rs/kWh)		(in Rs Cr)			(in Rs Cr)	(in Rs Cr)	(in Rs Cr)
	Metered	Unmetered	Total	Metered (out of col 2)	Unmetered* (out of col 3)	Total	Metered energy**	Unmetered energy	Metered energy	Unmetered energy	Total			
1	2	3	4= 2 + 3	5	6	7 = 5+6	8	9	10 = 5 x 8	11 = 6 x 9	12 = 10 + 11	13	14	15 = 13 + 14
Residential	4,76,11,019	0	47611019	0	0	0	0	0	0	0	0	0	0	0
Agricultural	48,385	0	48385	0	0	0	0	0	0	0	0	0	0	0
Commercial/Industrial-LT	7,59,21,011	0	75921011	0	0	0	0	0	0	0	0	0	0	0
Commercial/Industrial-HT	5,09,61,051	0	50961051	0	0	0	0	0	0	0	0	0	0	0
Others + own consumption	12,75,090	0	1275090	0	0	0	0	0	0	0	0	0	0	0
Total	**175816556**		**175816556**											
*Basis of assessment of energy to be provided in the notes along with relevant Government Orders														
** Provide copy of relevant work orders														
NO SUBSIDY IN TCED														

J Nagesh Kumar
Director/AEA 0133

Centre for Energy, Environment and Productivity
Plot No. 1039, 26th Street, H-Block,
Ponni Colony, Anna Nagar, Chennai - 600 040.
PH : 044 2616 3483, 9444882553

ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION

JOSE.T.S
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel:2423559

N K KRISHNAKUMAR
ASSISTANT SECRETARY
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION
PEN - 743648
PH No: 8921037758

➢ Details of DT level losses

a. Division wise status of DT level metering

Zone name	Circle name	Division name	Feeder name	Total no of DT on feeder	No of unmetered DTs	No of metered DTs			No. of DTs with functional meters	
						AMR metered (communicable)	AMI metered (communicable)	Non-AMR / AMI metered (non-communicable)	Communicating (Total No out of 7 and 8)	Non-communicating (Total No. out of 7,8 and 9)
1	2	3	4	5=(6+7+8+9)	6	7	8	9	10	11
TCED	TCED		Mission Quarters	32	3		29		29	
TCED	TCED		Veliyanoor	19	6		13		13	
TCED	TCED		Koorkenchery	23	6		17		17	
TCED	TCED		Paravattani	25	6		19		19	
TCED	TCED		Arnattukkara	33	6		27		27	
TCED	TCED		Jubilee Mission	Dedicated feeder	Dedicated feeder	Dedicated feeder		Dedicated feeder		
TCED	TCED		Vivekodhayam	22	10		12		12	
TCED	TCED		Bini	17	7		10		10	
TCED	TCED		Poonkunam	36	13		23		23	
TCED	TCED		Keralavarma	38	15		23		23	
TCED	TCED		Ramanilayam	19	8		11		11	
TCED	TCED		M O Road	31	11		20		20	
TCED	TCED		Kottappuram	40	8		32		32	
TCED	TCED		Chembukavu	25	7		18		18	
TCED	TCED		Shornur Road	44	17		27		27	
TCED	TCED		District Hospital	34	16		18		18	
TCED	TCED		East Fort	29	7		22		22	
TCED	TCED		Vanjikulam	28	6		22		22	

b. Details of DT-wise losses

Sub-station ID	Feeder ID	Feeder Name	DT Id no	DT Capacity (kVA)	Predominant consumer type of DT (Domestic/Industrial/Agriculture/Mixed)	Type of metering (Unmetered/AMI/AMR/Other)	Status of meter (functional/non-functional)	% of data received automatically (if AMI/AMR)	No. of connected consumers	Input Energy (MU)	Billed Energy (MU)	Loss of Energy (MU)	% Loss
		1	2						3	4	5	6 = 4-5	(7)= [(6)/(4)] *100
Not available as 100% DT metering not done also the DT measurement not yet commenced													

JOSE I.C.
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel: 2422556

J Nagesh Kumar
Director/AEA 0133
Centre for Energy, Environment and Productivity
Plot No. 1039, 26th Street, H-Block,
Ponni Colony, Anna Nagar, Chennai - 600 040.
PH : 044 2616 3483, 9444882553

N K KRISHNAKUMAR
ASSISTANT SECRETARY
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION
PEN - 743648
PH No: 8921037758

ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION

12. ABBREVIATIONS

ABR : Average billing rate
ACSR : Aluminium core steel reinforced
APFC : Automatic Power Factor controller
AVG : Average
BD : Billing demand
BDV : Breakdown voltage
BEE : Bureau of energy efficiency
CEA : Central electrical authority
CFL : Compact fluorescent lamp
CFM : Feet cube per minute
CT : Current transformer
DB : Distribution Board
DC : Designated consumer
DT : Distribution transformer
EC : Energy Conservation
FD : Forced draft
HPSV : High pressure sodium vapour
HT : High Tension
IEC : International electro technical commission
IEEE : The Institute of electrical and electronics engineers
IS : Indian Standard
KG : Kilo gram
KSEB : Kerala state electricity board
KVA : Kilo Volt Ampere
KVAH : Kilo volt Ampere Hour
KVAR : Kilo volt ampere
KW : Kilo Watts
KWH : Kilo watt hour
LED : Light emitting diode
LT : Low tension
MAX : Maximum
MH : Metal halide
MU : Million units
MVA : Mega volt ampere
MW : Mega watt
NEMA : National Electrical Manufacturers Association
ONAN : Oil natural air natural
PCC : Point of common coupling
PF : Power factor
PSI : Pound square inch
PT : Protentional transformer
R/km : Resistance per kilometre
RDSS : Revamped Distribution Sector Scheme
RMD : Registered Maximum demand
SDA : State designated agency
SEC : Specific electricity consumption
SFU : Switch Fuse Unit
SLD : Single Line Diagram
TDD : Total demand distortion
THD : Total harmonics distortion
TOD : Time of day
TOE : Tonne of oil equivalent
TPEA : Third party energy auditor

UG : Underground