

Annual Energy Audit Report

FY 2025-26



**Thrissur Corporation Electricity Department
(TCED)**

Reg No. DIS0070KL

Thrissur, Kerala.

Prepared by



ATHUL ENERGY CONSULTANTS PVT LTD

EmAEA-091

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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.

Athul Energy Consultants Pvt Ltd (AEC) 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 2026.

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



31-08-2026

Santhosh A

Managing Director/AEA 0275/EmAEA 091
Athul Energy Consultants Pvt Ltd

ENERGY AUDIT TEAM

The following are the team members of M/s Athul Energy Consultants Pvt Ltd who are conducted Annual Energy Audit of FY 2025-26 at the TCED.

Table 1: Energy audit team

Sr No	Name	Qualification	EM/EA/AEA/ Registration No	Experience (In Years)
Team Leader				
1	Mr. Santhosh A	• Accredited Energy Auditor	AEA-0275	35
Team Members				
2	Mr. Gayatri R Nair	• Certified Energy Auditor • Sector Expert	EA - 5918	40
3	Mr. Ashok K M P	• Certified Energy Auditor • M. E. (Energy Engineering)	EA- 34760/22	14
4	Ms. Della David	• Certified Energy Auditor • M. Tech (Power electronics)	EA -34867/22	16
5	Ms. Keerthana K	• Certified Energy manager	EM – 11843/23	06

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EXECUTIVE SUMMARY

1. PERFORMANCE SUMMARY

The performance summary of TCED as DISCOM as per the FY 2025-26 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, 2025 - 31st March, 2026	
2	Technical Details		
(a)	Energy Input Details		
(i)	Input Energy Purchase (From Generation Source)	Million kWh	180.033
(ii)	Net input energy (at DISCOM Periphery including sale outside periphery)	Million kWh	180.033
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded)	Million kWh	168.08
(b)	Transmission and Distribution (T & D) loss (Billing efficiency)	Million kWh	11.956
		%	6.64
(i)	Collection Efficiency	%	99.68%
(c)	Aggregate Technical & Commercial Loss	%	6.94%

2. HISTORICAL ANALYSIS OF T&D LOSS

The following figure shows the T&D loss variation in last 6 FY.

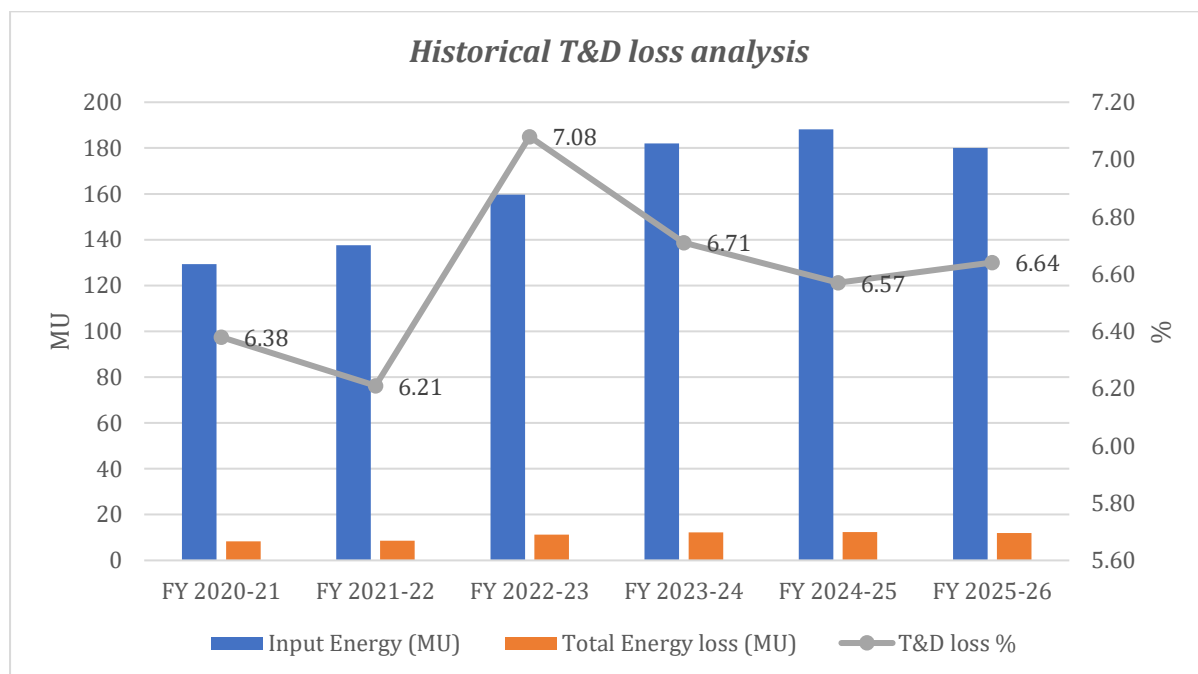


FIGURE 1: HISTORICAL T&D LOSS ANALYSIS

3. GENERAL OBSERVATIONS AND SUGGESTIONS

TABLE 3: GENERAL OBSERVATIONS AND SUGGESTIONS

Observation	Suggestions	Benefits
Collection efficiency of the DISCOM has been 99.68% 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 collection efficiency can be 100%.	Collection efficiency of the DISCOM is 99.68% which resulted in AT & C loss 6.94% (FY-2025-26) 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 98.42% 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 4: Solar generation share

Total Energy Consumption FY 2025-26 (MU)	180.033	
Details	Solar generation & banked units from consumer	Non-solar generation
Present status - MU	2.853	0
Present status - %	1.583%	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 5: 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 2026 in order to submit the Energy audit report. Thus, the TCED entrusted the work to Athul Energy Consultants Pvt Ltd as per the work order no: BEE/DISCOM-13644/26 dated 27th June 2026 and the latter started the field study by last week of July- field study for 02 days - and draft report submitted on 31st August 2026.

5. PROGRESS IN COMPLIANCE TO PREREQUISITES TO ENERGY ACCOUNTING

Table 6: Progress in energy accounting

Quarter	Submission date	Ref no
1 st Quarter – 1 st April 2025 to 30 th June 2025	20-08-2025	Mail
2 nd quarter – 1 st July 2025 to 30 th Sept 2025	13-11-2025	Mail
3 rd Quarter - 1st Oct 2025 to 31st Dec 2025	11-02-2026	Mail
4 th Quarter – 1 st Jan 2026 to 31 st Mar 2026	13-05-2026	Mail

DISCOM INTRODUCTION AND OVERVIEW

1. NAME AND ADDRESS OF DESIGNATED CONSUMER

Table 7: 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 8: 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 2025-26 is given in the following table.

Table 9: Summary of DISCOM – Form-1

Performance Summary of Electricity Distribution Companies			
1	Period of Information	1 st Apr, 2025 - 31 st March, 2026	
	Year of (FY) information including Date and Month (Start & End)		
2	Technical Details		
(a)	Energy Input Details		
(i)	Input Energy Purchase (From Generation Source)	Million kWh	180.033
(ii)	Net input energy (at DISCOM Periphery including sale outside periphery)	Million kWh	180.033
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded)	Million kWh	168.08
(b)	Transmission and Distribution (T&D) loss (Billing efficiency)	Million kWh	11.956
		%	6.64
	Collection Efficiency	%	99.68%
(c)	Aggregate Technical & Commercial Loss	%	6.94%

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 10: T & D loss – Summarised – feeder wise

Sl. No	Feeder	Sales	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	10.1	1.256	0.023	0.181	0.004	11.564	1.46	12.66
2	Veleyannor	8.96	0.825	0.019	0.116	0.002	9.922	0.96	9.70
3	Koorkenchery	8.74	1.899	0.034	0.139	0.005	10.818	2.08	19.21
4	Paravattany	9.63	1.632	0.060	0.172	0.006	11.501	1.87	16.27
5	Aranatukara	11.31	2.459	0.052	0.213	0.012	14.047	2.74	19.49
6	JMC	8.08				0.004	8.084	0.00	0.05
7	Vivekodhayam	7.16	0.770	0.025	0.113	0.002	8.070	0.91	11.28
8	Bini	5.99	0.268	0.005	0.088	0.001	6.352	0.36	5.70
9	Poonkunam	8.23	0.002	0.010	0.165	0.002	8.409	0.18	2.13
10	Keralavarma	10.36	1.187	0.034	0.225	0.008	11.814	1.45	12.30
11	Ramanilayam	7.93	0.210	0.008	0.093	0.002	8.242	0.31	3.79
12	M O Road	12.53	0.002	0.018	0.170	0.003	12.723	0.19	1.52
13	Kottapuram	5.71	0.272	0.003	0.020	0.001	6.006	0.30	4.93
14	Chembukkavu	8.86	0.877	0.023	0.121	0.004	9.884	1.02	10.36
15	Shornur Road	11.06	0.432	0.035	0.210	0.002	11.740	0.68	5.79
16	District Hospital	11.62	0.002	0.057	0.168	0.004	11.851	0.23	1.95
17	East Fort	11.85	1.162	0.035	0.203	0.005	13.254	1.40	10.59
18	Vanjikulam	9.05	0.001	0.018	0.155	0.003	9.227	0.18	1.92
	Total	167.17	13.26	0.46	2.55	0.07	183.51	16.34	8.90

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.**
- **The difference in feeder wise loss and actual loss due to the Distributed solar generation in the feeder. Due to the DRE as roof top solar power plants, the actual loss is reduced considerably.**

Energy flow diagram is given below in figure:

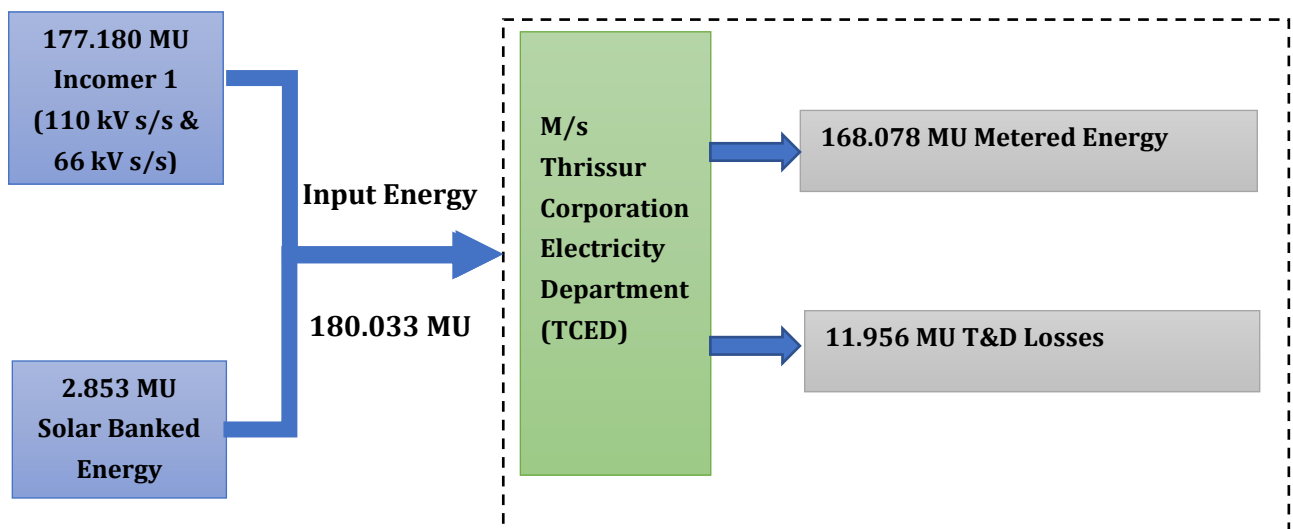


Figure 2: Energy flow diagram - TCED

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

FORM INPUT ENERGY

The table below shows the **major energy parameters for the FY 2025-26**

Table 11: 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 2025 to March 2026	Remarks (Source of data)
A.1	Input Energy purchased (MU)	180.033	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)	180.033	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%	356 out of 515 transformers
	Total number of DT (Nos)	515	
A.11	Total number of consumers (Nos)	43392	
	Number of HT consumers (Nos)	141	
	Number of LT consumers (Nos)	43251	
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 12: Metered reading of input energy

B. Meter reading of Input energy at injection points																
S.No	Zone	Circle	Voltage 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 2025 to March 2026				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	01-04-2026	Mixed	0	0	NA	X2005320	200/1	177.180	-	110 kV s/s
B.2	TCED	TCED	66	OLVI	Metered	Functioning	01-04-2026	Mixed	0	0	NA	17052040	200/1		-	66 kV s/s
B.3	TCED	TCED	0.415	Multiple feeders	Metered	Functioning	01-04-2026	Mixed	0	0	NA	-	-	0.37		Consumer bills
B.4	TCED	TCED	11	Multiple feeders	Metered	Functioning	01-04-2026	Mixed	0	0	NA	-	-	2.49		Consumer bills
Total (MU)														180.033	0.0	
Net input energy at DISCOM periphery (MU)														180.033		

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 13: Feeder List

Feeder No	Feeder	No: of Transformer
1	Mission Quarters	35
2	Veliyanoor	19
3	Koorkkenchery	25
4	Paravattani	25
5	Arnattukkara	35
6	Jubilee Mission	Dedicated feeder HT
7	Vivekodhayam	24
8	Bini	18
9	Poonkunam	36
10	Keralavarma	38
11	Ramanilayam	19
12	M O Road	31
13	Kottappuram	43
14	Chembukavu	26
15	Shornur Road	45
16	DH	35
17	East Fort	33
18	Vanjikulam	28
	Total	515

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 quarters feeder

Table 14: HT line distance –Mission quarters feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm ²)	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 (mm ²)	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 (mm ²)	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	

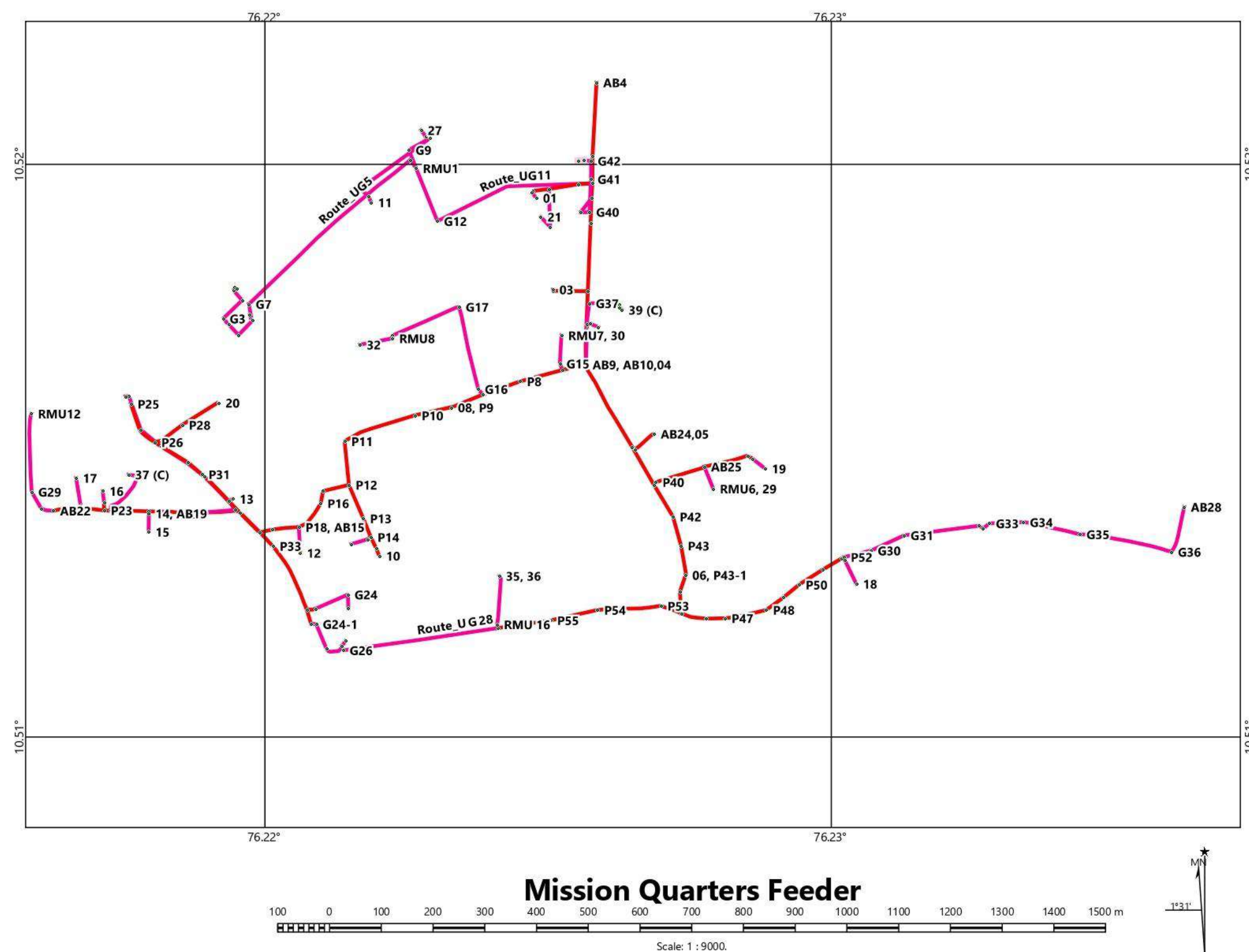


Figure 3: Mission quarters feeder

2. VELIYANOOR

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

Table 15: 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

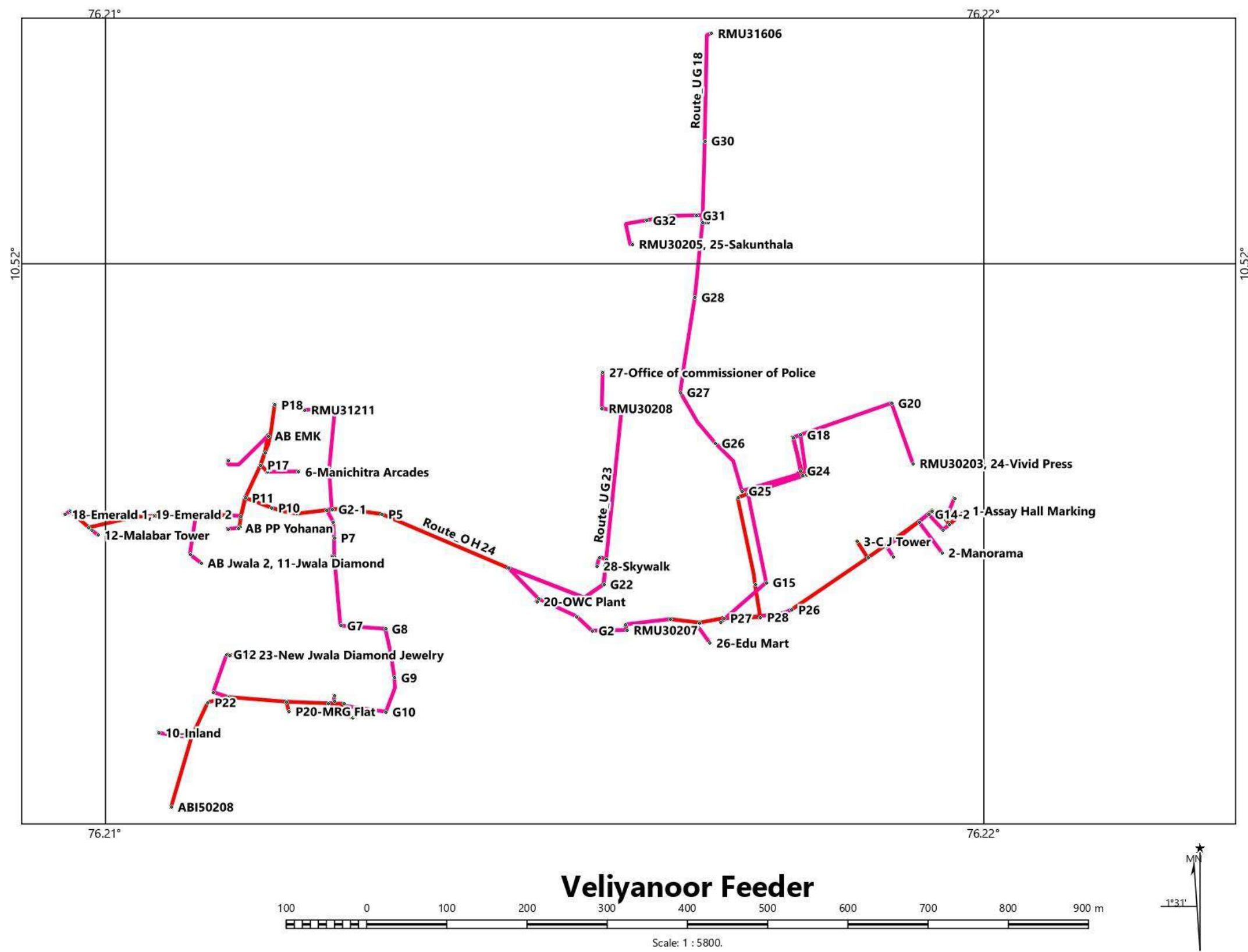


Figure 4: Veliyanoor feeder

3. KOORKKENCHERY FEEDER

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

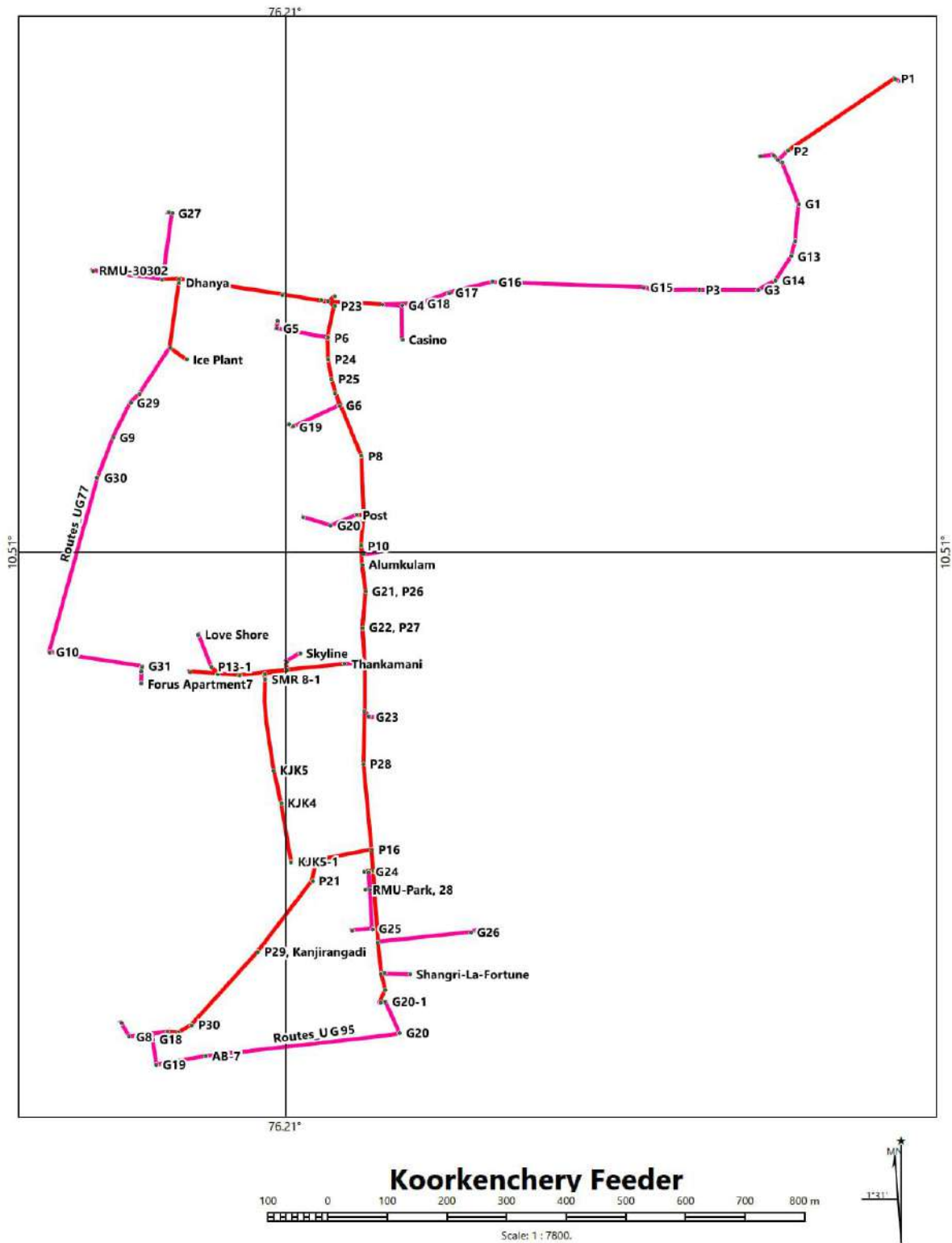
Table 16: HT line distance – Koorkkenchery feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable size (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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



4. PARAVATTANI FEEDER

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

Table 17: 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	

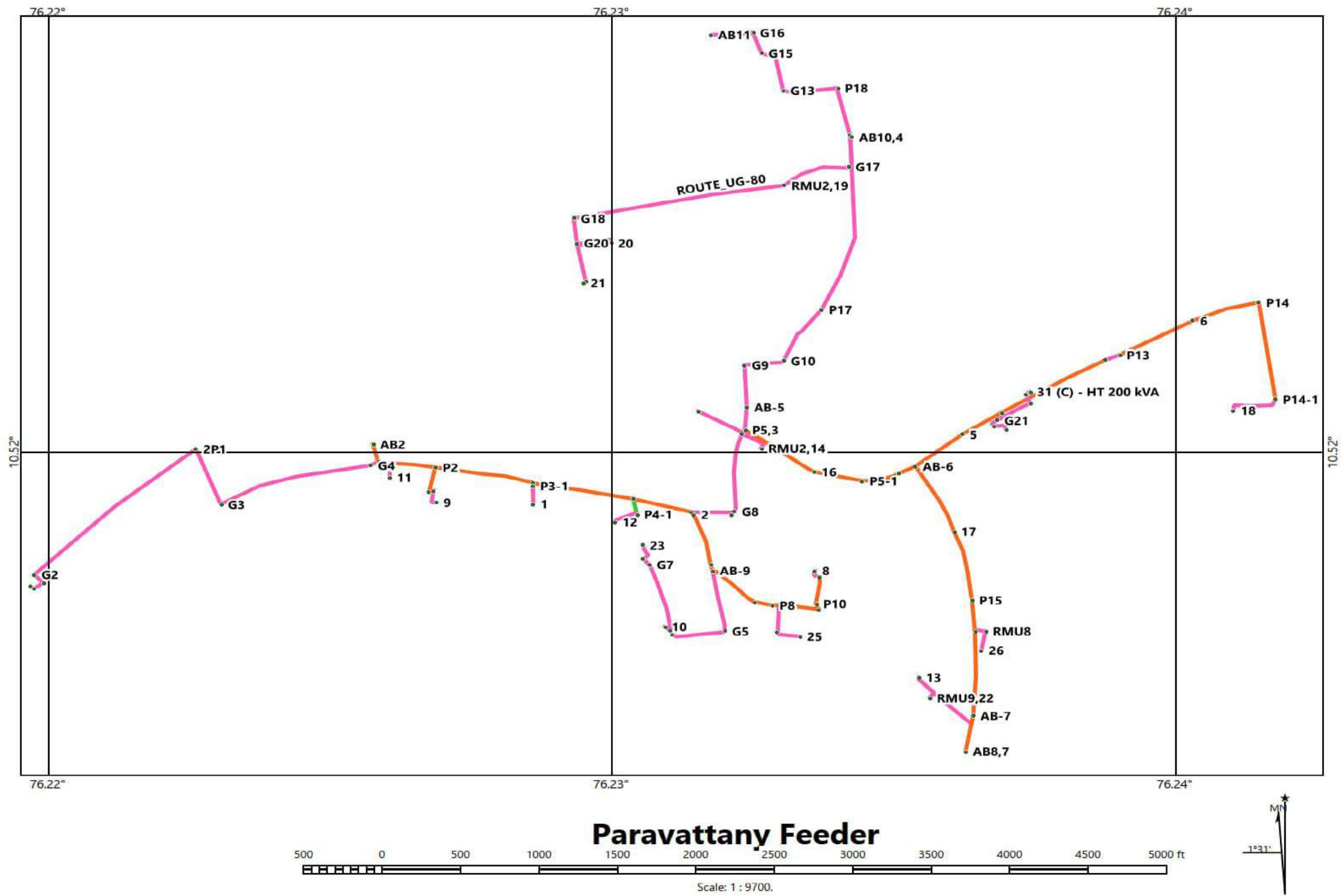


Figure 6: Paravattani feeder

5. ARANATTUKARA FEEDER

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

Table 18: 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 Pothole	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

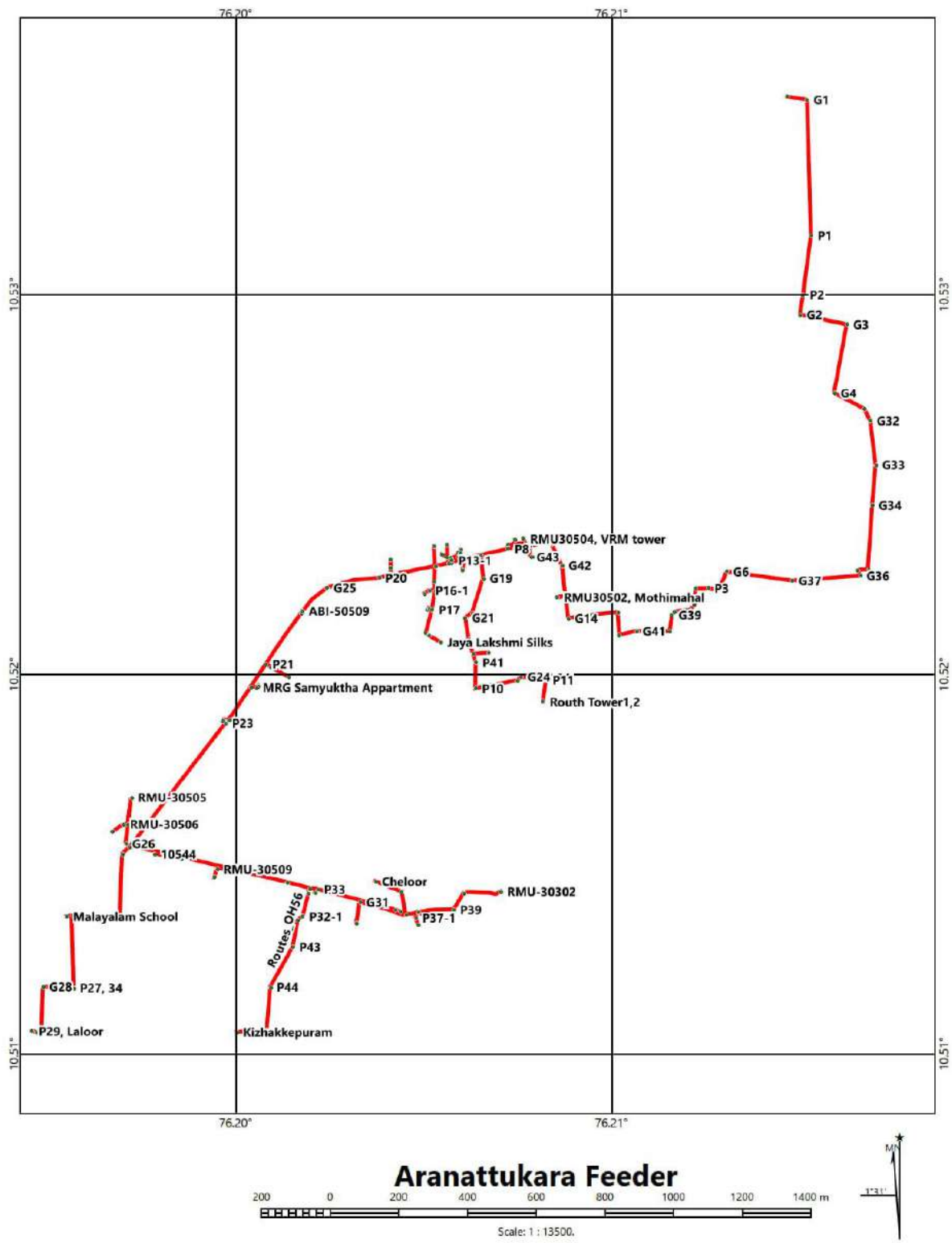


Figure 7: Arnattukara feeder

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 19: 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

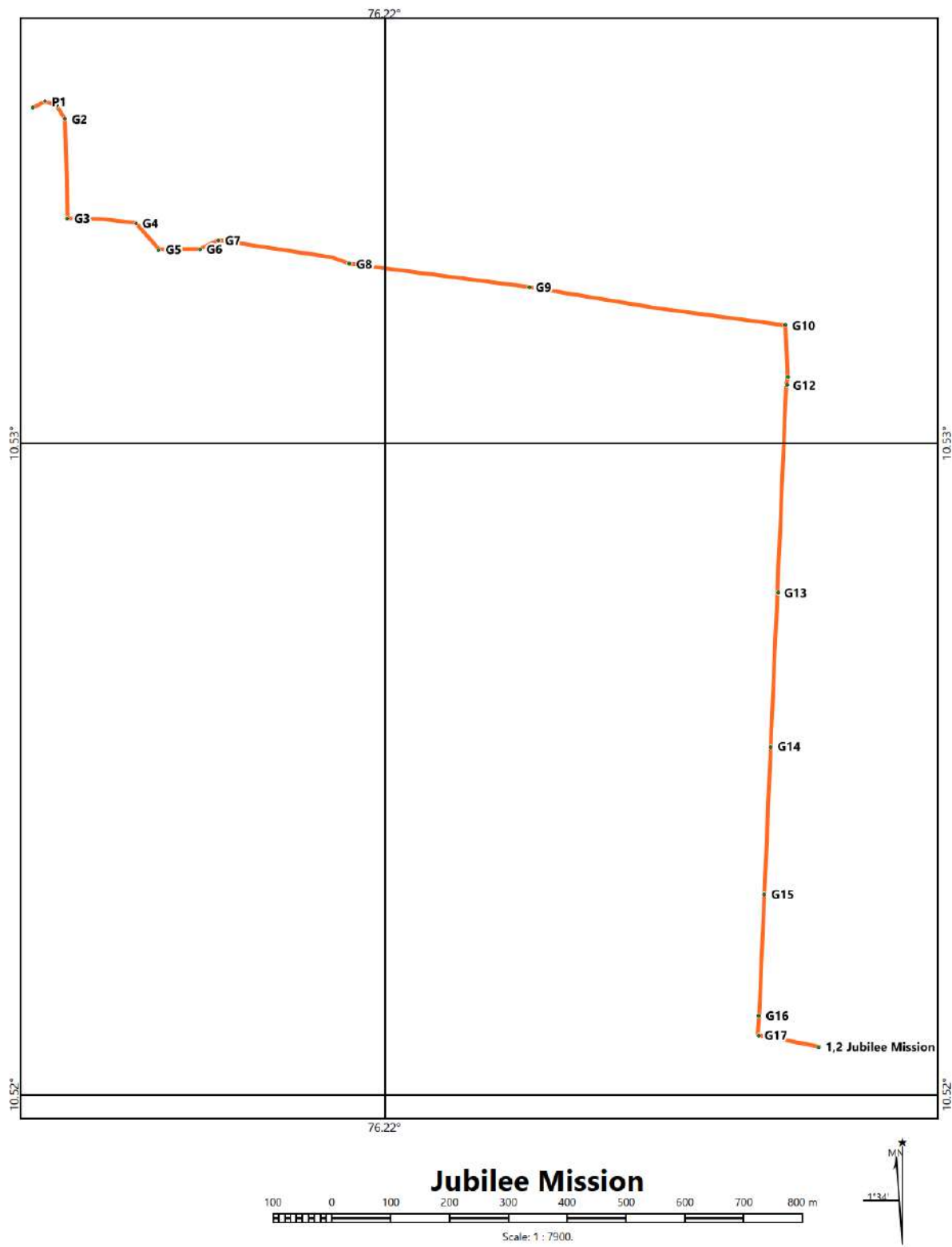


Figure 8: Jubilee mission feeder

7. VIVEKODAYAM FEEDER

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

Table 20: 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

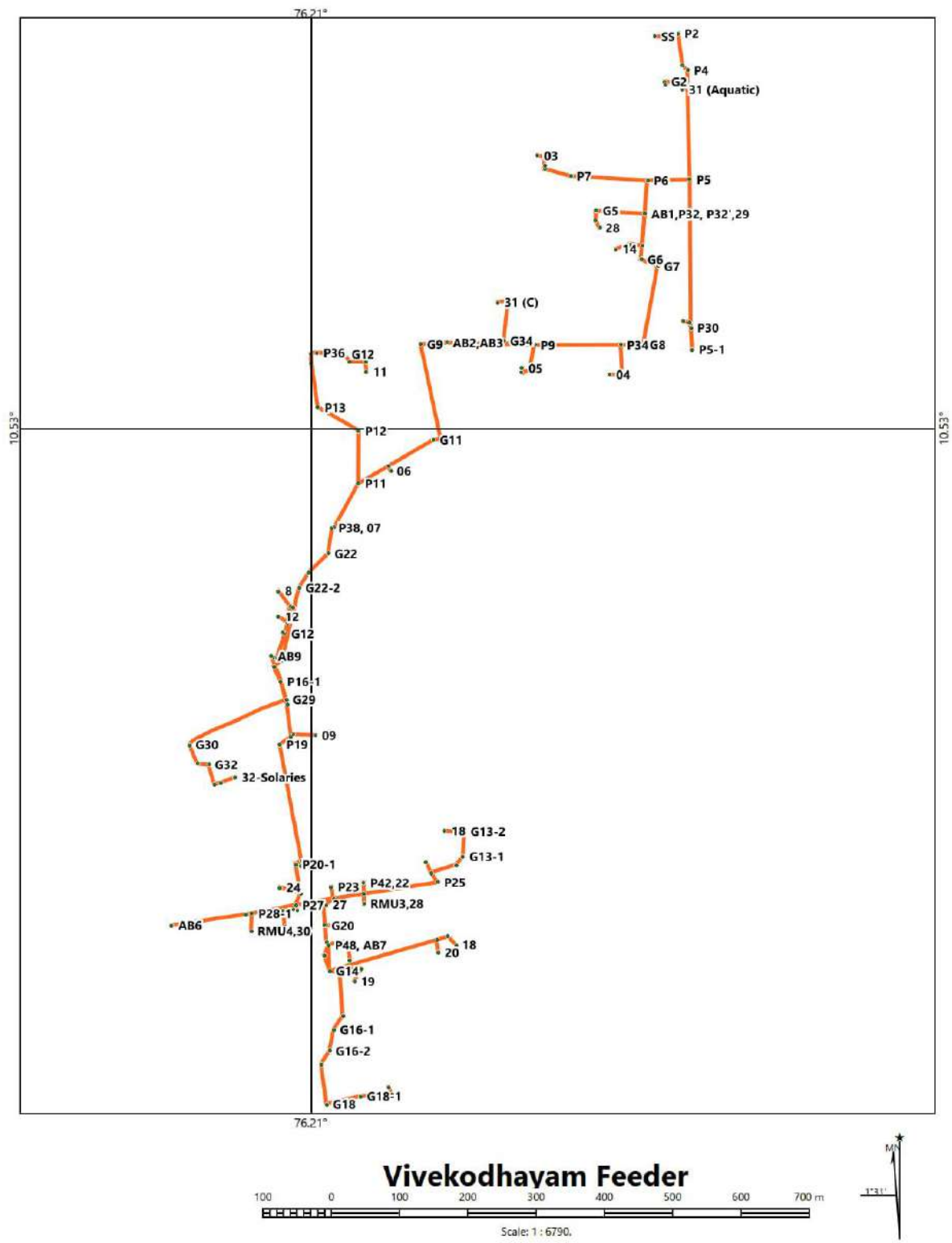


Figure 9: Vivekodayam feeder

8. BINI FEEDER

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

Table 21: 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

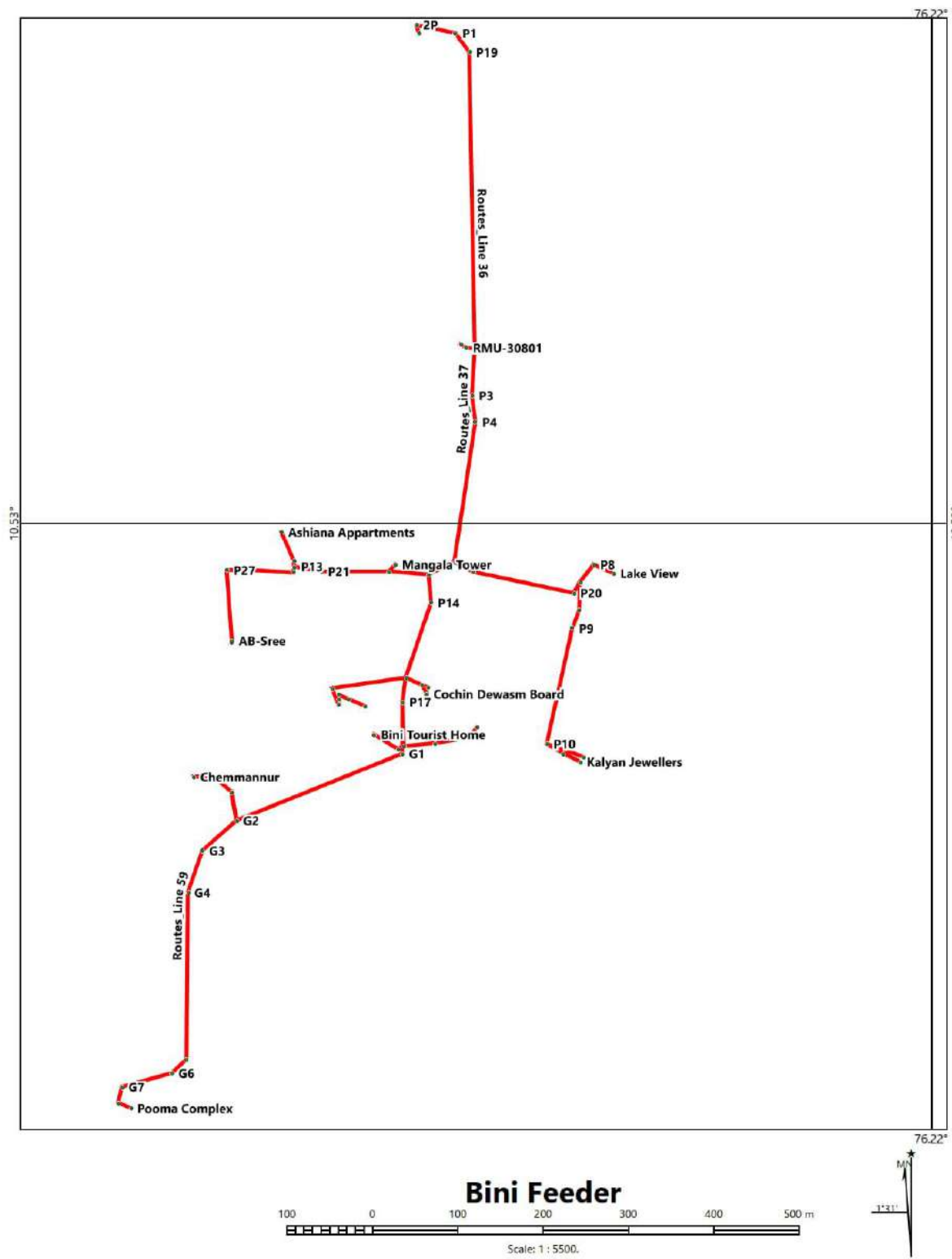


Figure 10: Bini feeder

9. POONKUNAM FEEDER

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

Table 22: 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	ABI50904	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	Pallisery Apartment	10.535922	76.207287	UG	XLPE	300	21		21
AB2	AB3	ABI50906	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	76.201445	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

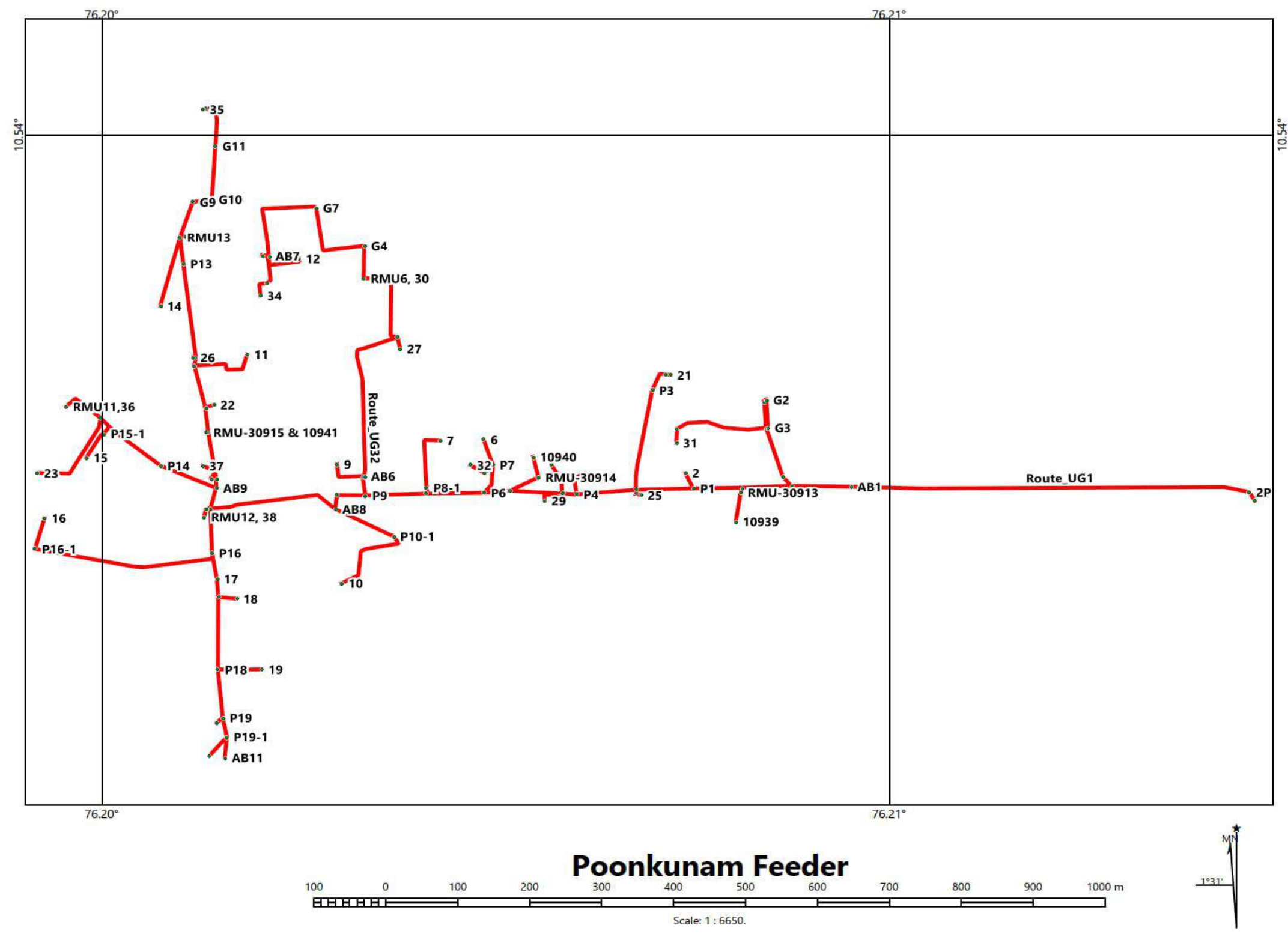


Figure 11: Poonkunam feeder

10. KERALAVARMA FEEDER

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

Table 23: 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

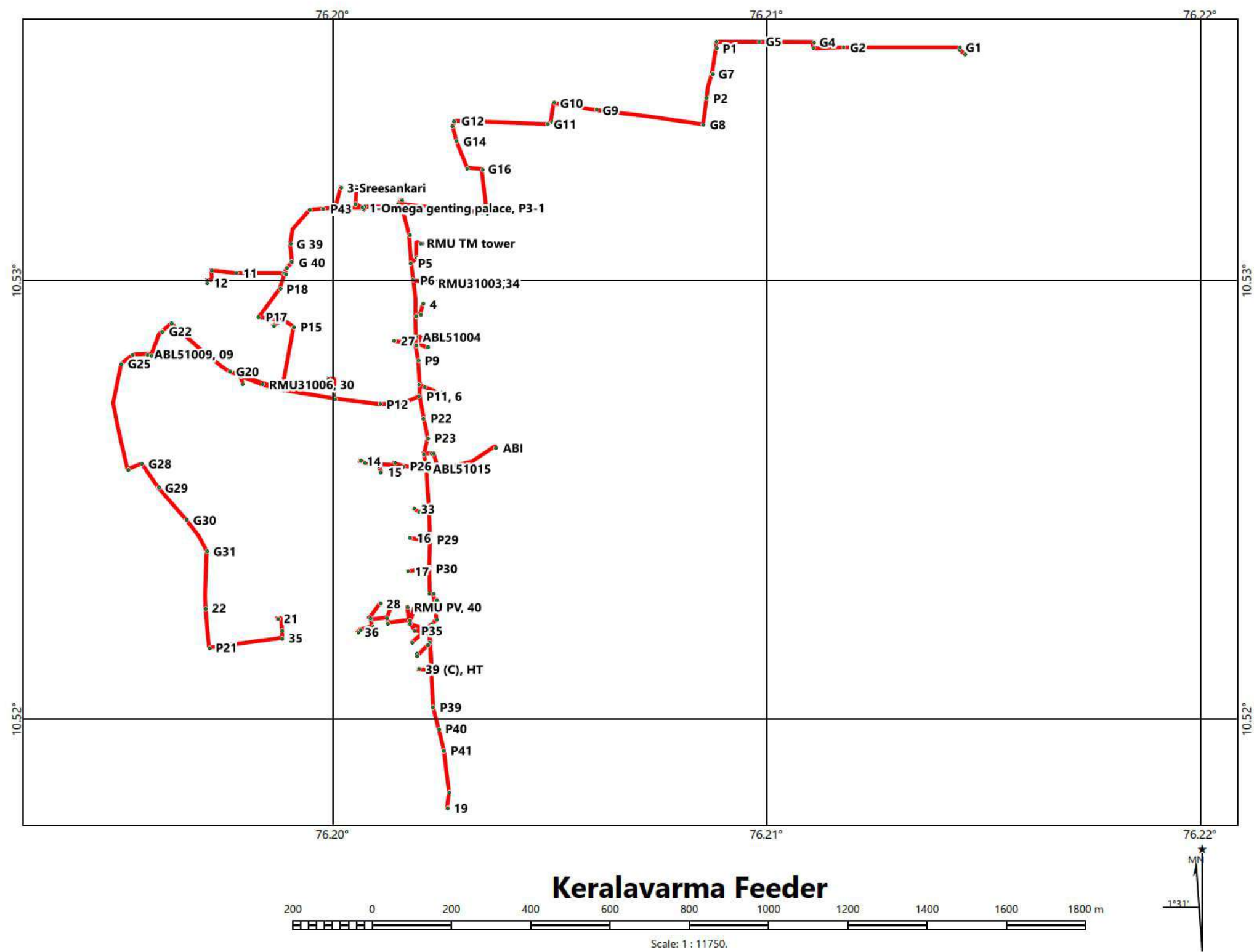


Figure 12: Keralavarma feeder

11. RAMANILAYAM FEEDER

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

Table 24: HT line distance – Ramanilayam feeder

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm ²)	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 (mm ²)	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 Chiriyam Kandath	AB		10.528363	76.218016	OH	Racoon		12.03		12.03
AB Chiriyam Kandath	12	Chiriyam Kandath	LT	10.528236	76.217919	UG	XLPE	150	17.61	28	45.61
AB Chiriyam 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 (mm ²)	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	Paramekkavu 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 (mm ²)	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 (mm ²)	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

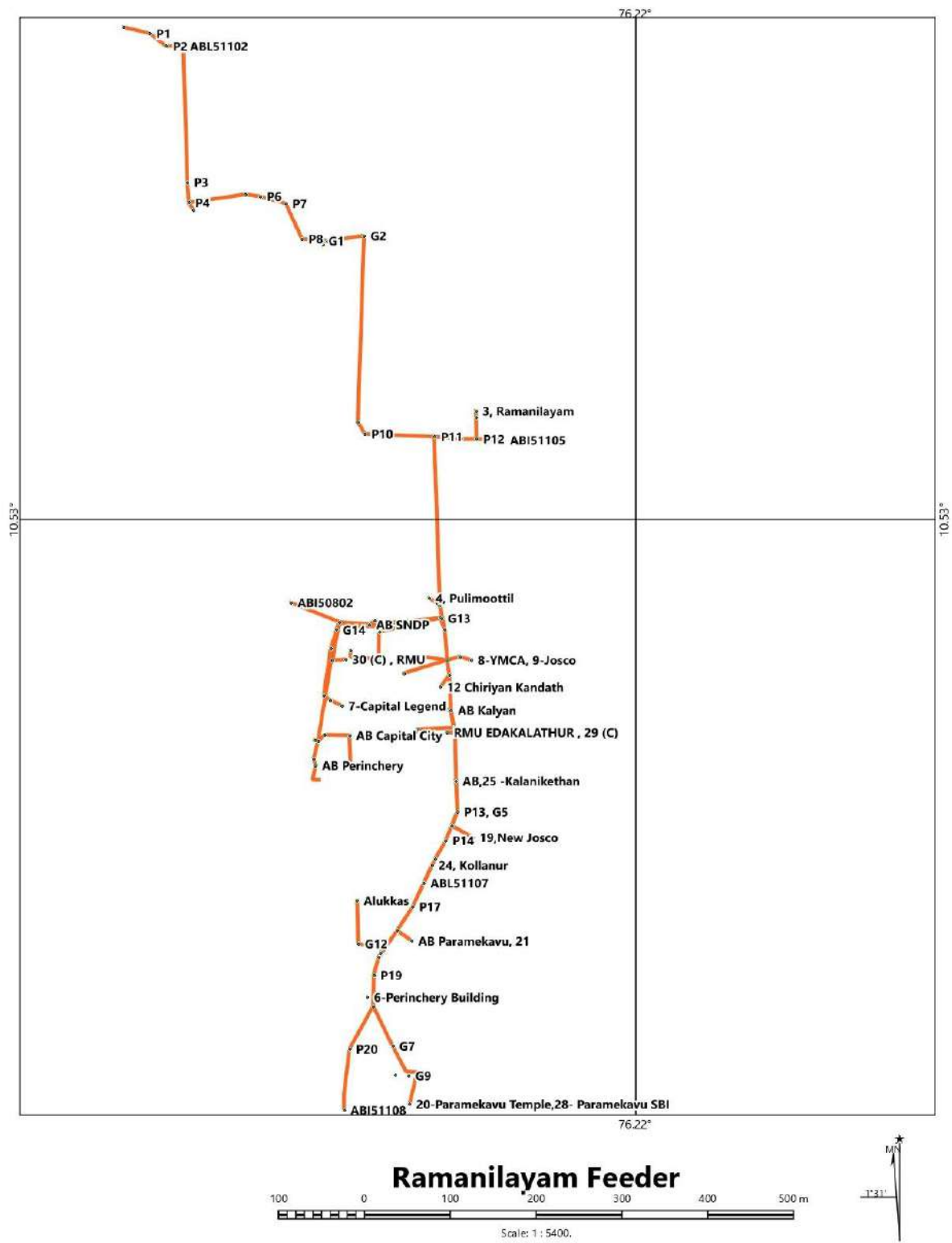


Figure 13: Ramanilayam feeder

12. M O ROAD FEEDER

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

Table 25: 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

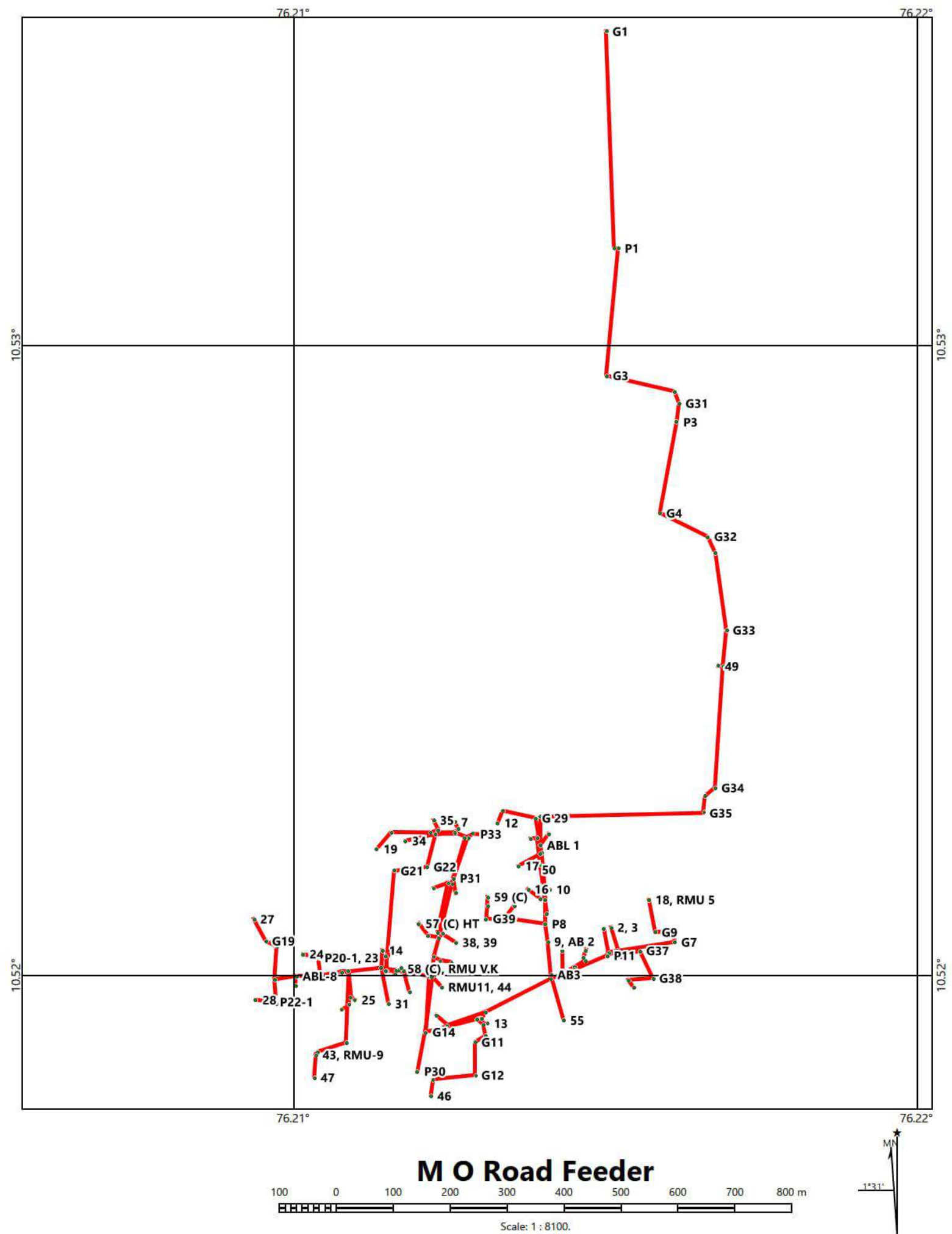


Figure 14: M O Road feeder

13. KOTTAPURAM FEEDER

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

Table 26: HT line distance –Kottapuram feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm ²)	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 (mm ²)	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 (mm ²)	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	Chelloor 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 (mm ²)	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 (mm ²)	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

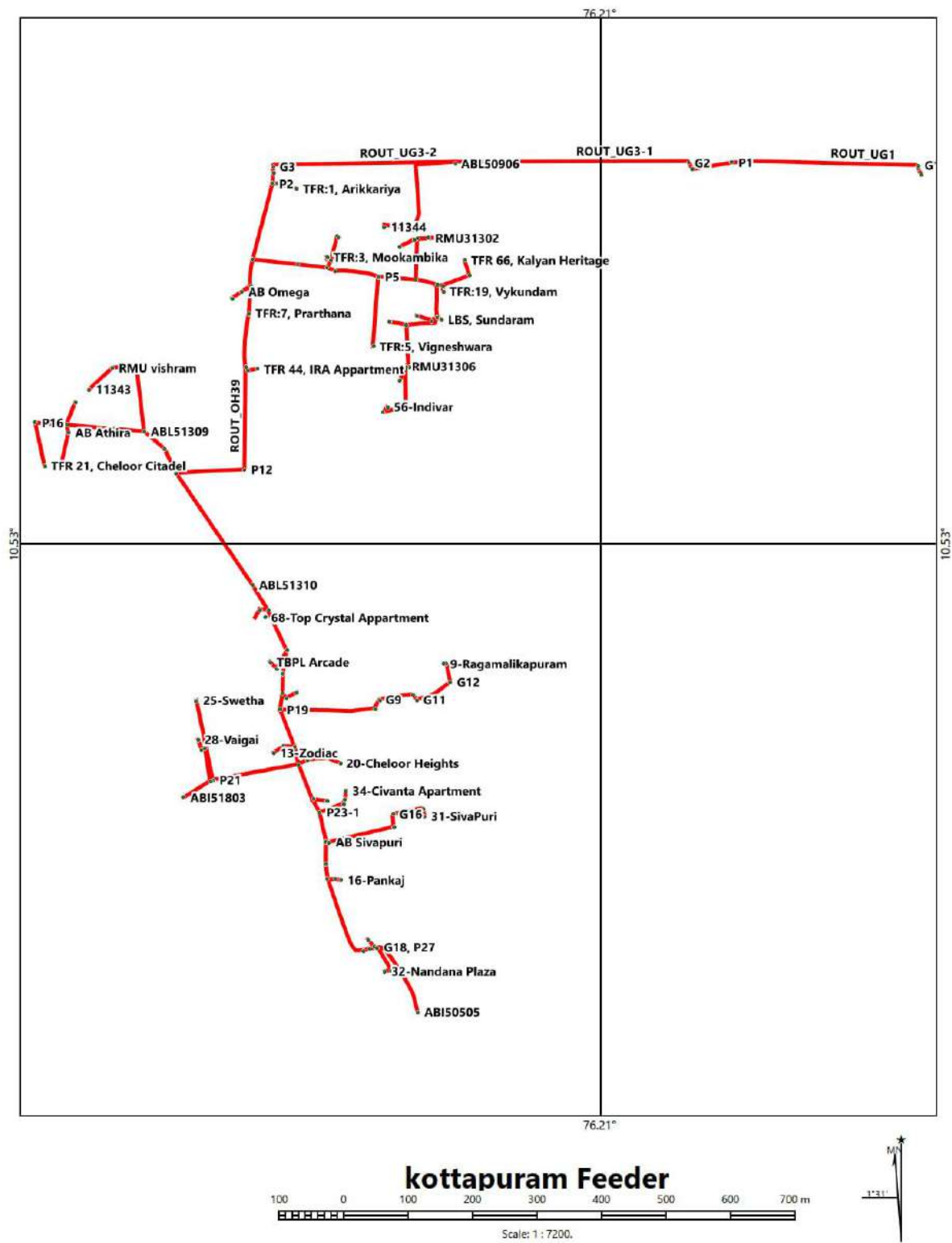


Figure 15: Kottapuram feeder

14. CHEMBUKAVU FEEDER

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

Table 27: 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	Meterin g point	Latitude	Longitude	Cab le	Cable type	Cabl e size (sq mm)	Mappin g distanc e (m)	Loose distanc e (m)	Total distanc e (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	Meterin g point	Latitude	Longitude	Cab le	Cable type	Cabl e size (sq mm)	Mappin g distanc e (m)	Loose distanc e (m)	Total distanc e (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	Meterin g point	Latitude	Longitude	Cab le	Cable type	Cabl e size (sq mm)	Mappin g distanc e (m)	Loose distanc e (m)	Total distanc e (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	Meterin g point	Latitude	Longitude	Cab le	Cable type	Cabl e size (sq mm)	Mappin g distanc e (m)	Loose distanc e (m)	Total distanc e (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

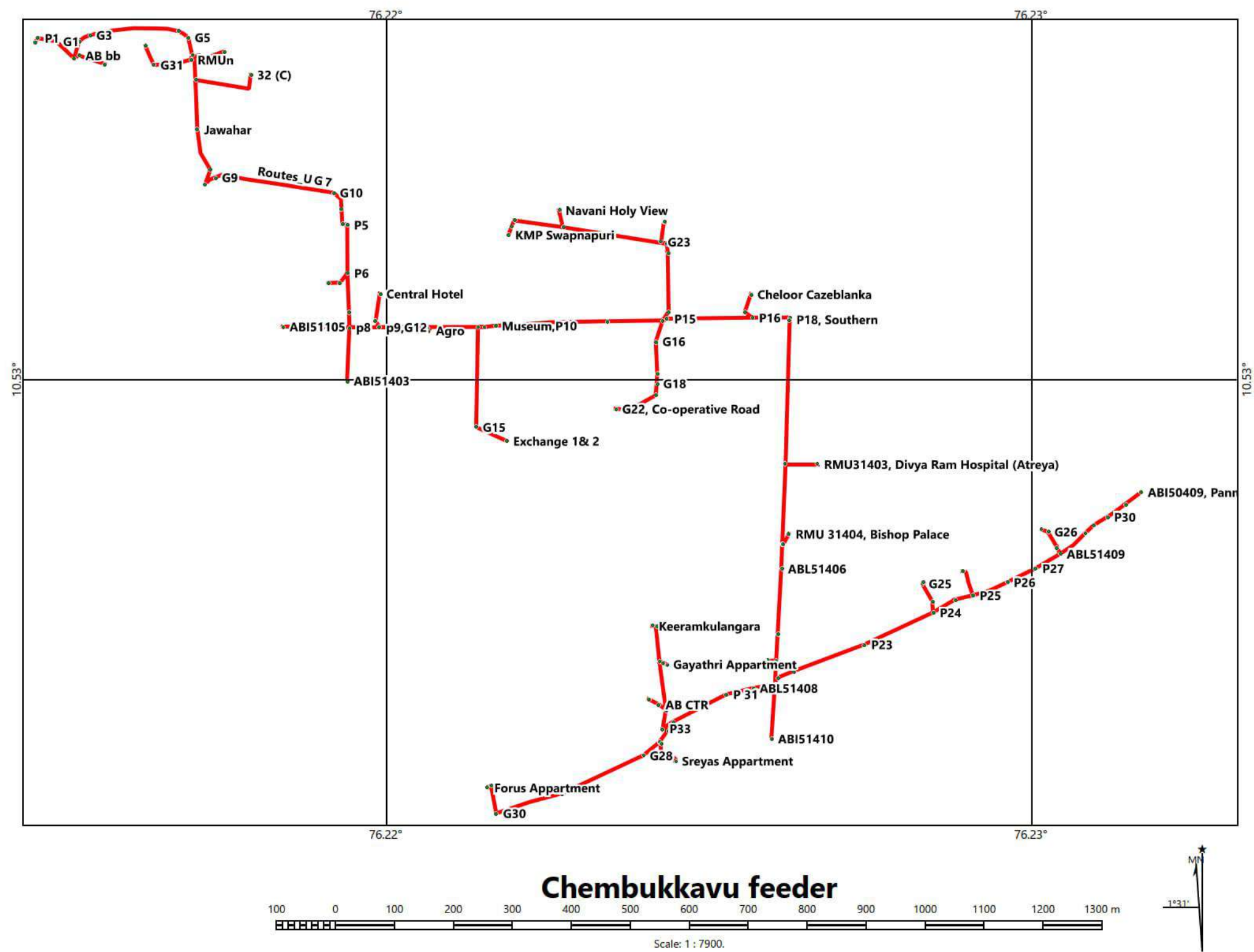


Figure 16: Chembukkavu feeder

15. SHORNUR ROAD FEEDER

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

Table 28: HT line distance – Shornur road feeder

From Map no	Map no	Pole/transformer/ AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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 17: Shornur road feeder

16. DISTRICT HOSPITAL FEEDER

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

Table 29: 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 cooperative 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

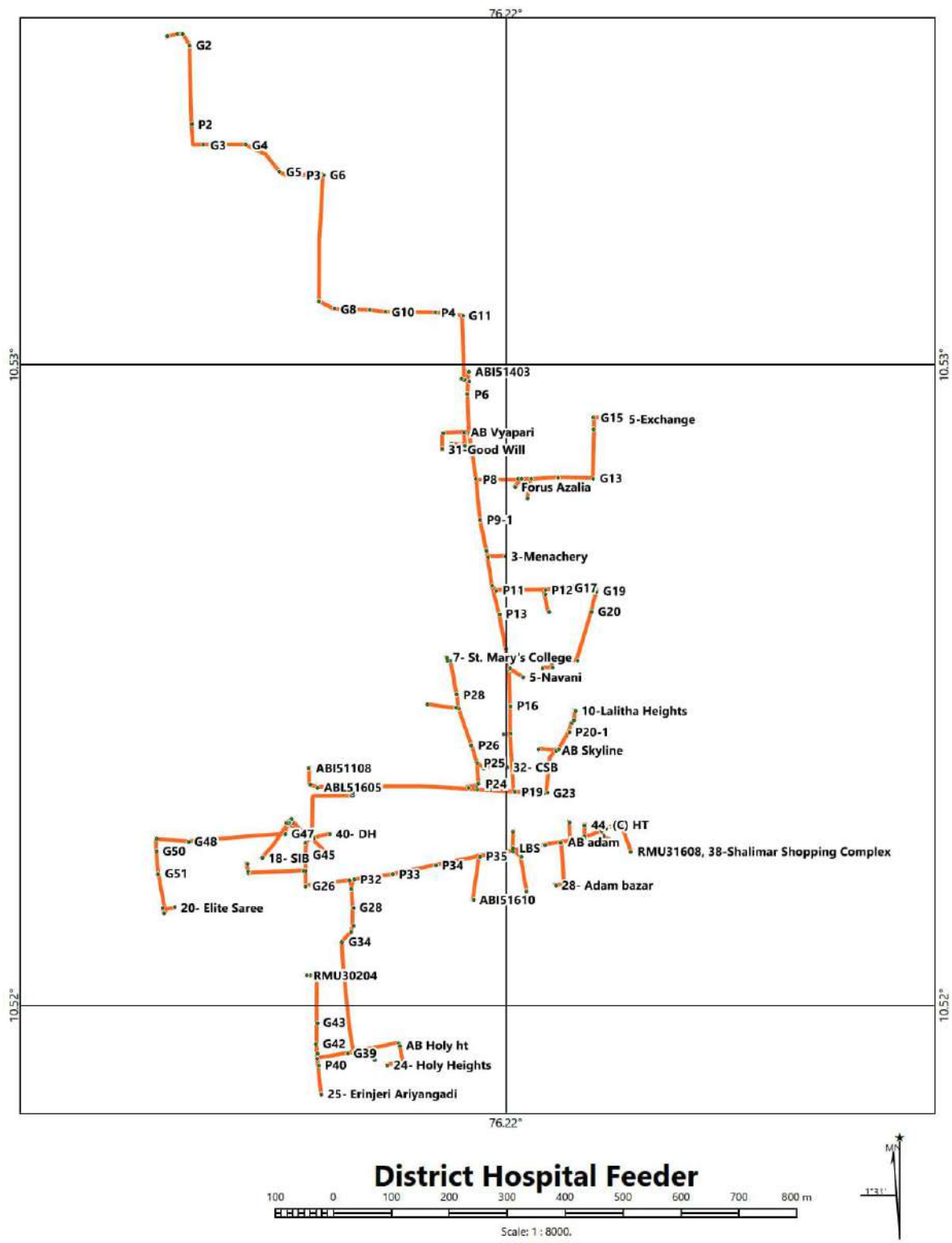


Figure 18: District Hospital feeder

17. EAST FORT FEEDER

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

Table 30: 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

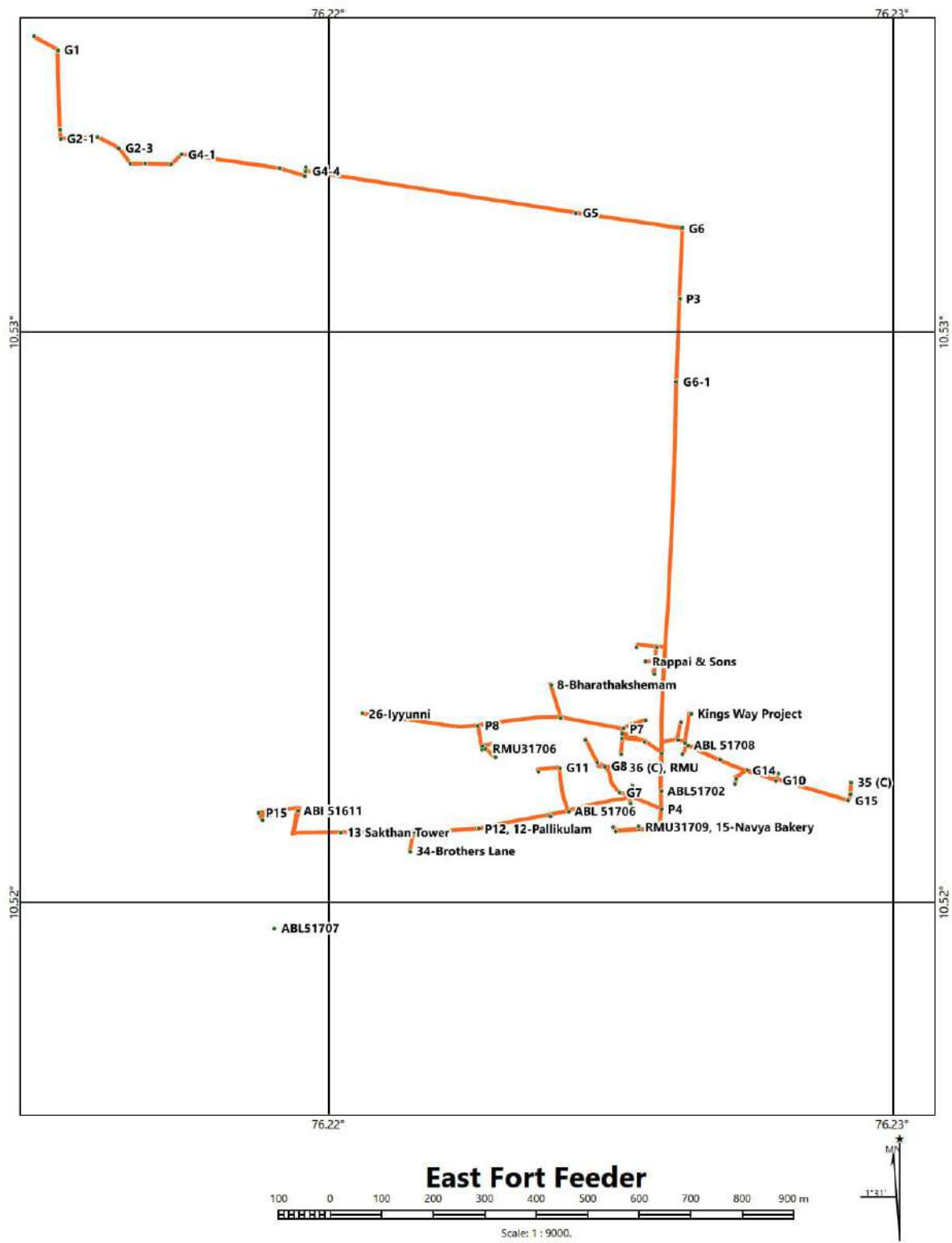


Figure 19: East fort feeder

18. VANCHIKULAM FEEDER

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

Table 31: HT line distance –Vanchikulam feeder

From Map no	Map no	Pole/transformer/AB	Metering point	Latitude	Longitude	Cable	Cable type	Cable size (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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 (mm ²)	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

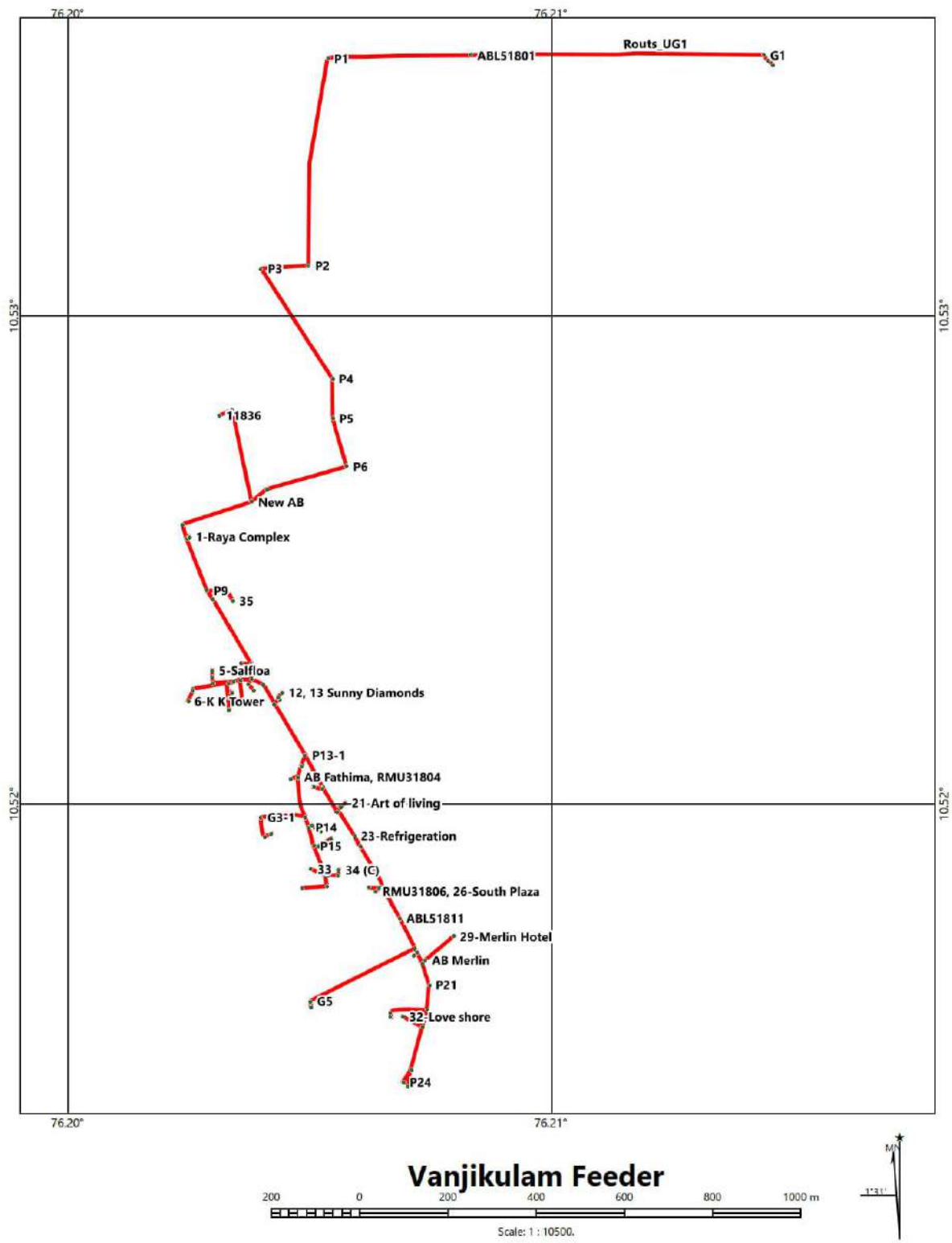


Figure 20: Vanchikulam feeder

5. ENERGY CONSERVATION MEASURES SUMMARY

LIST OF ENERGY CONSERVATION MEASURES ADOPTED/TAKEN

Following are the list of measures implemented by the TCED for the FY 2025-26 to reduce the T&D loss in the DISCOM area as per the Form 3 Submission.

TABLE 32: LIST OF ENERGY CONSERVATION MEASURES IMPLEMENTED

Sl. No.	Description of Energy Efficiency Improvement Measures	Category	Investment (₹)	Verified Savings (₹)	Verified Energy Savings	Units	Fuel	Remarks
1	New transformer at Load Centre Chakkamukku	—	8.59 lakhs	Yet to Calculate	Yet to Calculate	—	—	—
2	New transformer at Load Centre Punkunnam railway gate	—	8.59 lakhs	—	—	—	—	—
3	New transformer at Kizhakkumpattukara	—	2.93 lakhs	—	—	—	—	—
4	Installation of prepaid meters for all govt consumers along with an associated Advanced Metering Infrastructure (AMI), Communicable/Smart meters for Distribution Transformers (DTs) and all 11 kV Feeders.	—	60 Lakhs	—	—	—	—	—

LIST OF ENERGY CONSERVATION MEASURES – UNDER IMPLEMENTATION

TABLE 33: LIST OF ENERGY CONSERVATION MEASURES UNDER IMPLEMENTATION

Sl. No.	Description of Energy Efficiency Improvement Measures	Category	Investment (₹) Estimated	Verified Energy Savings Estimated	Units	Status of Implementation
1	Under RDSS project TCED aims to replace around 107.5 ckt km of LT ABC cable , of which 37% is completed . This project replaces more than 50% of LT OH lines of TCED.	—	9.60 Crore	—	—	ONGOING
2	Under RDSS project TCED aims to replace around 57 ckt km of 11 kV HT UG cable , of which 16% is completed . This project replaces 50% of HT OH lines of TCED.	—	18.78 Crore	0.1%–0.2% of annual energy consumption by 2025-28	0.1%–0.2% of annual energy consumption by 2025-28	ONGOING
3	The project involves constructing a 110 kV substation at Laloor and a 7.5 × 2 km 110 kV DC line . The 110 kV substation at Laloor is critical for enhancing the reliability and capacity of the electricity distribution network, improving voltage stability, and reducing losses. This infrastructure upgrade is necessary to meet the growing electricity demand and ensure a stable power supply to consumers.	—	38 Crores	0.1%–0.2% of annual energy consumption by 2025-28		ONGOING

ENERGY FLOW ANALYSIS

1. ENERGY FLOW

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

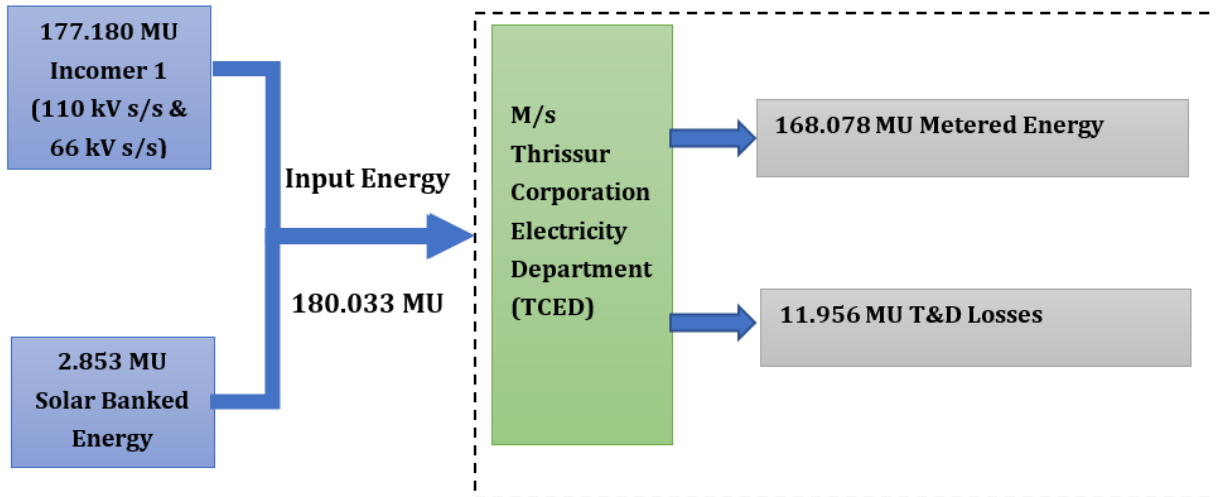


Figure 21: Energy flow diagram - TCED

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

2. VALIDATION OF METERED DATA

The validation of data includes the KSEBL metering and feeder meters in the switching station of the TCED. Sample metered were analysed in the feeder and incomer meter. The main KSEB meter is been calibrated every year from the MRT and the verified the certificate. The sample feeder and consumer meters does match the variance and the values were withing the limit.

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

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

Base Line Data – FY 2025-26		
1	Electricity provider	KSEBL
2	Supply Voltage	110 kV
3	Tariff	Licensee: Thrissur Corporation– EHT TARIFF
4	Consumer number	LCN: 21/1029/THR
5	Section office	110 KV Sub Station, Viyyur
6	Contract demand (kVA)	45000.0
7	Maximum demand registered (kVA)	40315 kVA (May 2025)
8	Average monthly electricity consumption (MU)	14.765
9	Annual unit consumption (MU)	177.18
10	Average power factor	0.97
11	Tariff Rate of energy charges (Rs / kWh)	6.85
12	Demand charge (Rs / kVA)	425
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	515
18	Number of DT at 415V level	515
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
26	Number of consumers - as of March 2026	43392
27	Connected load (MW) - as of March 2026	280.69
28	Number of HT consumers	141
30	Number of LT consumers	43251

• DEMAND ANALYSIS

DEMAND TARIFF STRUCTURE

As per the Kerala State Electricity regulatory commission (KSERC) tariff order 427/D(T)/2023/KSERC dated 05/12/2024, 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 425 Rs/kVA

DEMAND REGISTERED - FY 2025-26

The registered or billed demand thus applied to the TCED and the consumption during the FY 2025-26 is given in the figure below.

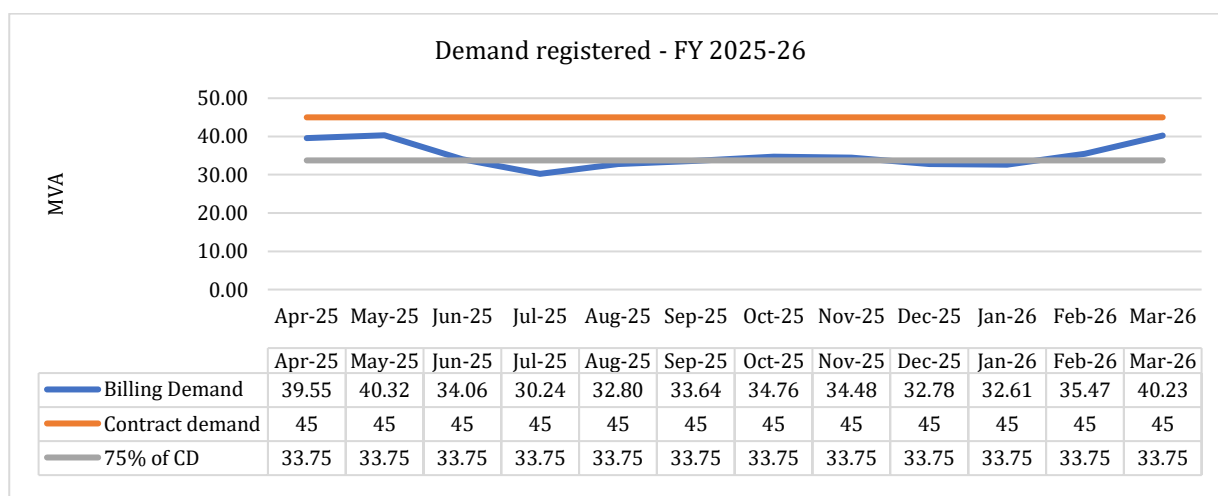


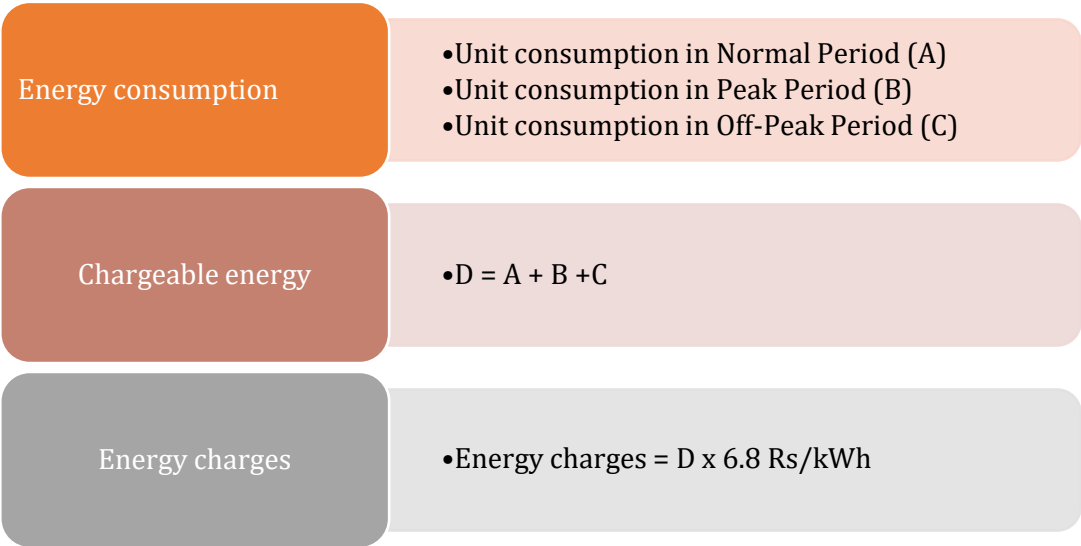
Figure 22: Demand variation – FY 2025-26

• ENERGY CONSUMPTION ANALYSIS

Energy Calculation Method

As per the Kerala State Electricity regulatory comission (KSERC) tariff order 427/D(T)/2023/KSERC dated 05/12/2024, 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.



Unit Consumed – FY 2025-26

This section analyses the trend for the unit consumption by the TCED over the period FY 2025-26. A total of 177.18 MU consumed by TCED during FY 2025-26 through KSEB.

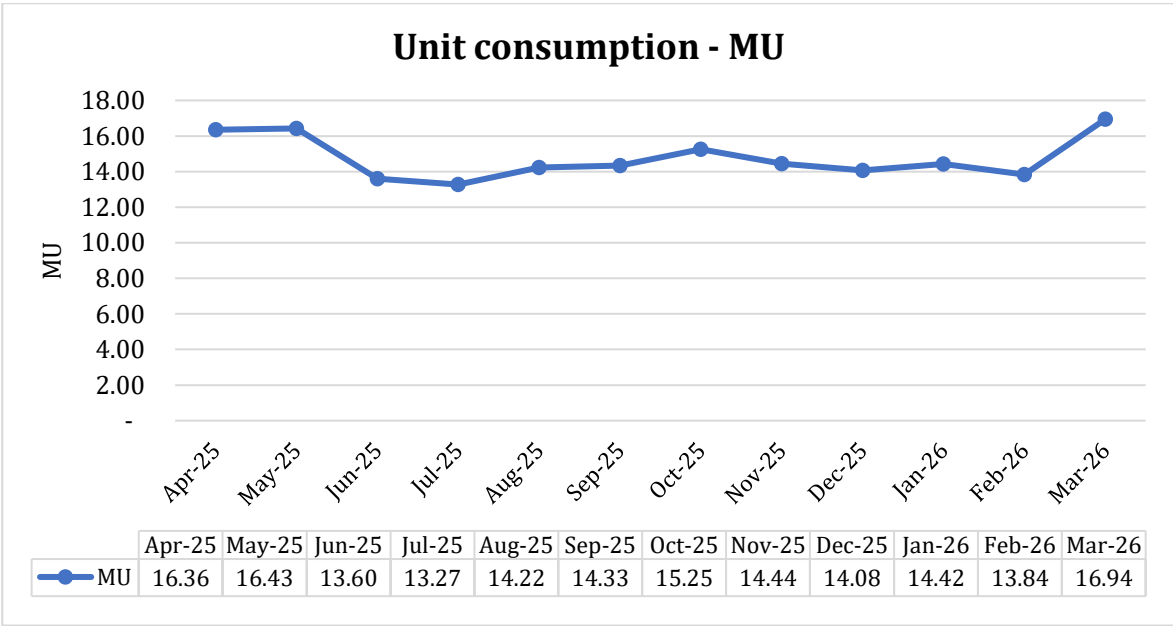


Figure 23: Energy consumption analysis

• POWER FACTOR ANALYSIS

Power factor calculation method

As per the Kerala State Electricity regulatory commission (KSERC) tariff order 427/D(T)/2023/KSERC dated 05/12/2024, 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	• $PF = A \div B$
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). Accordingly, TCED has been receiving PF incentives for maintaining the PF above 0.95 and up to unity, amounting to approximately ₹121 lakhs during FY 2025-26.

Power factor registered in FY 2025-26

This section analyses the trend for the Power factor over the period FY 2025-26

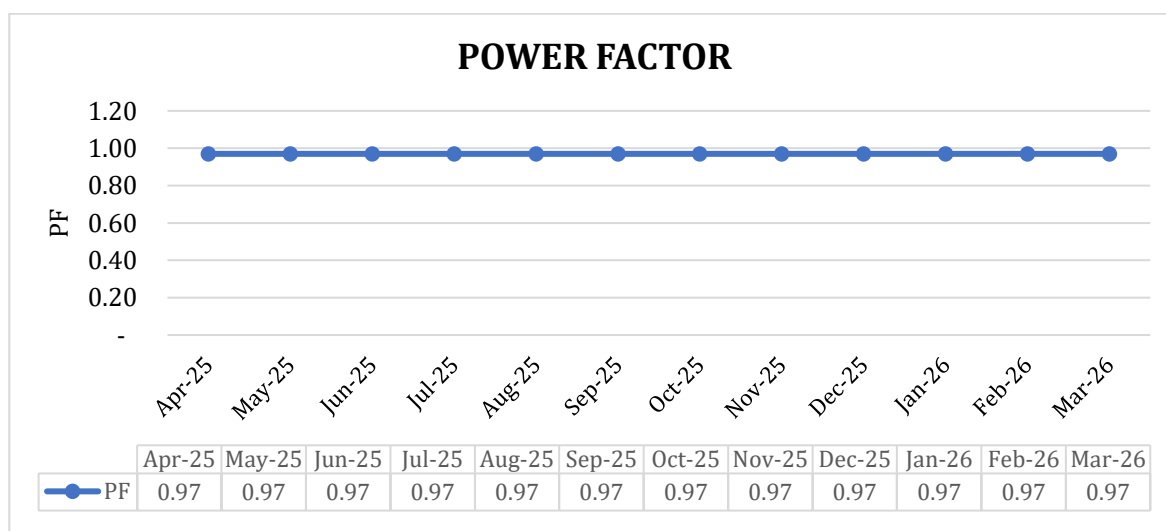


Figure 24: Power factor

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

Table 34: Observations & Recommendation – Energy Consumption Profile

Observation	Recommendation	Benefit
Demand charges reduction by Power factor improvement		
PF was maintained in the range of 0.97 during the FY 25-26.	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 to 0.99	- The net annual savings by the PF improvement is Rs 80 lakhs/annum by the improvement of PF to 0.99. - 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 2025-26, 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 35: Feeder wise sales data FY 2025-26

Sl no	Feeder Name	Energy sold by DISCOM	
		kWh/year	kWh/month
1	Mission Quaters	1,01,00,000	8,41,667
2	Veleyannor	89,60,000	7,46,667
3	Koorkenchery	87,40,000	7,28,333
4	Paravattany	96,30,000	8,02,500
5	Aranattukara	1,13,10,000	9,42,500
6	JMC	80,80,000	6,73,333
7	Vivekodhayam	71,60,000	5,96,667
8	Bini	59,90,000	4,99,167
9	Poonkunam	82,30,000	6,85,833
10	Keralavarma	1,03,60,000	8,63,333
11	Ramanilayam	79,30,000	6,60,833
12	M O Road	1,25,30,000	10,44,167
13	Kottapuram	57,10,000	4,75,833
14	Chembukkavu	88,60,000	7,38,333
15	Shornur Road	1,10,60,000	9,21,667
16	DH	1,16,20,000	9,68,333
17	East Fort	1,18,50,000	9,87,500
18	Vanjikulam	90,50,000	7,54,167

LOSS & SUBSIDY COMPUTATION

1. ENERGY ACCOUNTS ANALYSIS FOR PREVIOUS YEARS- FY 2024-25

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

Table 36: Summary of DISCOM – FY 2024-25

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

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

Table 37: AT & C loss – FY 2024-25

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	
TCE D	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 + Feedback		1.28	0.73%			42.45	41.28	97.24%	
Total		188.189	175.817	100%	12.373	6.57%	176.71	174.62	98.81 %	7.68 %

2. ENERGY ACCOUNTS ANALYSIS FOR PRESENT YEAR- FY 2025-26

CATEGORY OF DIVISION WISE LOSSES – FY 2025-26

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

Table 38: Division wise losses

Division Wise Losses												
Name of circle	Period From 1st April 2025 to 31st March 2026											
	Consumer profile					Energy parameters					Losses	
	Consumer category	No of connection metered (Nos)	No of connection Un-metered (Nos)	Total Number of connections (Nos)	% of number of connections	Billed energy (MU)				% of energy consumption	T&D loss (MU)	T&D loss (%)
						Input energy (MU)	Metered energy	Unmetered/assessment energy	Total energy			
TCED	Residential	23411	0	23411	54%	180.033	40.67	0	40.67	24.19%	11.956	6.64%
	Agricultural	174	0	174	0.40%		0.05	0	0.05	0.03%		
	Commercial/Industrial-LT	19278	0	19278	44%		76.06	0	76.06	45.25%		
	Commercial/Industrial-HT	141	0	141	0.32%		50.04	0	50.04	29.77%		
	Others	388	0	388	1%		1.26	0	1.26	0.75%		
Sub-total		43392	0	43392	100%	180.033	168.078	0	168.078	100%	11.956	6.64%

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 % = $\frac{\text{T\&D Losses (MU)}}{\text{Input Energy to the circle (MU)}} * 100$
- T&D Losses (MU) of a DISCOM = $\frac{\text{Sum of circlewise T\&D Losses (MU)}}{\text{Cumulative Sum of Input Energy (MU) to all circle}} * 100$

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 99.68% the AT&C loss of TCED registered was 6.94% during the FY 2025-26.

Table 39: AT & C loss – FY 2025-26

S · N o	Name of circle	Period From 1st April 2025 to 31st March 2026									
		Consumer profile	Energy parameters			Losses		Commercial Parameter			AT & C loss (%)
		Consumer category	Input energ y (MU)	Metered energy	% Of energy consu mption	T&D loss (MU)	T&D loss (%)	Billed Amoun t in Rs. Crore	Collected Amount in Rs. Crore	Collectio n Efficienc y	
1	TCED	Residential	180.0 33	40.67	24.19%	11.95 6	6.64%	31.40	31.31	99.70%	
		Agricultural		0.05	0.03%			0.03	0.02	83.33%	
		Commercial/ Industrial-LT		76.06	45.25%			87.30	86.85	99.48%	
		Commercial/ Industrial-HT		50.04	29.77%			53.00	53.00	100.00%	
		Others		1.26	0.75%			0.68	0.68	99.53%	
Sub-total			180.0 33	168.07 8	100%	11.95 6	6.64%	172.41	171.86	99.68%	6.94 %

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

FEEDERWISE LINE DETAILS

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 40: 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		
12	M O Road	1,731	170	209	480	266	4,885		26

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
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

TECHNICAL LOSSES – SUMMARY

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

TABLE 41: SUMMARISED – FEEDER WISE TECHNICAL LOSSES

Sl. No	Feeder	Sales	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	10.1	1.256	0.023	0.181	0.004	11.564	1.46	12.66
2	Veleyannor	8.96	0.825	0.019	0.116	0.002	9.922	0.96	9.70
3	Koorkenchery	8.74	1.899	0.034	0.139	0.005	10.818	2.08	19.21
4	Paravattany	9.63	1.632	0.060	0.172	0.006	11.501	1.87	16.27
5	Aranatukara	11.31	2.459	0.052	0.213	0.012	14.047	2.74	19.49
6	JMC	8.08				0.004	8.084	0.00	0.05
7	Vivekodhayam	7.16	0.770	0.025	0.113	0.002	8.070	0.91	11.28
8	Bini	5.99	0.268	0.005	0.088	0.001	6.352	0.36	5.70
9	Poonkunam	8.23	0.002	0.010	0.165	0.002	8.409	0.18	2.13
10	Keralavarma	10.36	1.187	0.034	0.225	0.008	11.814	1.45	12.30
11	Ramanilayam	7.93	0.210	0.008	0.093	0.002	8.242	0.31	3.79
12	M O Road	12.53	0.002	0.018	0.170	0.003	12.723	0.19	1.52
13	Kottapuram	5.71	0.272	0.003	0.020	0.001	6.006	0.30	4.93
14	Chembukkavu	8.86	0.877	0.023	0.121	0.004	9.884	1.02	10.36
15	Shornur Road	11.06	0.432	0.035	0.210	0.002	11.740	0.68	5.79
16	District Hospital	11.62	0.002	0.057	0.168	0.004	11.851	0.23	1.95
17	East Fort	11.85	1.162	0.035	0.203	0.005	13.254	1.40	10.59
18	Vanjikulam	9.05	0.001	0.018	0.155	0.003	9.227	0.18	1.92
	Total	167.17	13.26	0.46	2.55	0.07	183.51	16.34	8.90

- *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.*
- *Also the high losses observed in above calculation, however, with the high DRE – rooftop solar generation – in the DISCOM, actual loss is reduce to 6.64%.*

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 2025-26, 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 2025-26.

6. TREND ANALYSIS

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

Table 42: Historical energy accounts/loss of the DISCOM

	1. T&D Losses analysis for 2023-24				2. T&D Losses analysis for 2024-25			
Particulars	Input energy	Total Billed energy	Total energy Loss	T&D losses %	Input energy	Total Billed energy	Total energy Loss	T&D losses %
	(MU)	(MU)	(MU)		(MU)	(MU)	(MU)	
DISCOM - TCED	182.078	169.87	12.209	6.71	188.189	175.82	12.373	6.57

The graphical representation of the losses for the six years (including audit period FY 2025-26) is given in the figure below.

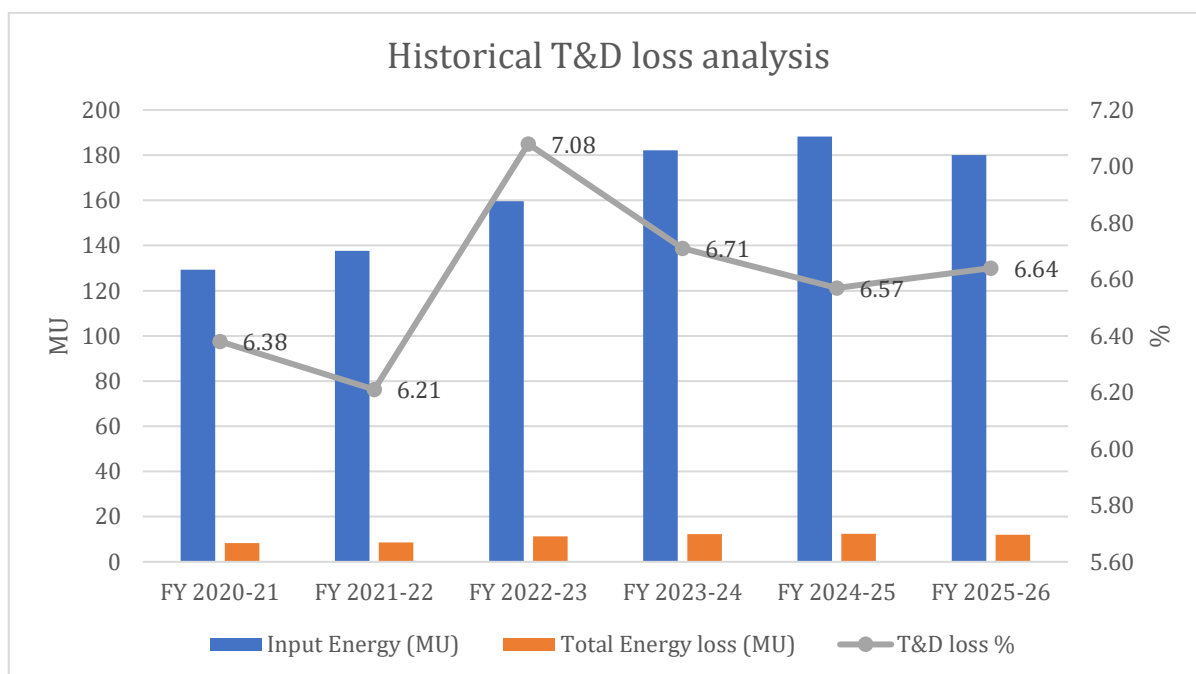


Figure 25: Historical T & D loss with audited data

- The T&D loss % shows a slight increase from FY 2024-25 to FY 2025-26.

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 4 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 25-26 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 25-26 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.	Completed
		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	Completed
		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 (31 st March 2026) out of total 515 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: 100% Communicable Feeder Metering integrated with	d.2 69.12% 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
		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.

Clause No	Clause Details	Subclause Details	Present Status	Action plan/ comments by DISCOM												
		d.3.5. Other high loss areas i.e. rural areas with losses more than 25% and urban areas with losses more than 15%.	d.3.5. Not applicable as T&D loss is less than 15%													
		d4. Consumer Metering: 98% by FY 2023-24 99% by FY 2025-26	d4. 100% of the consumers are metered.													
		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>	Meter	FY 22-23	FY 23-24	FY24-25	Feeder metering	98.5%	99.5%	99.5%	DT metering	90%	95%	98%	d5. 100% of the feeders are metered. 95% of the DT are metered. 100% of the consumers are metered.	DT metering will complete by FY 2026-27 along with RDSS scheme.
Meter	FY 22-23	FY 23-24	FY24-25													
Feeder metering	98.5%	99.5%	99.5%													
DT metering	90%	95%	98%													
		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.	e.1. DC yet to start the work	DT metering will start in phased manner.												
		e.2.And existing non-communicable distribution transformer meters is replaced with communicable meters and integrated with advanced metering infrastructure.	e.2. Yet to start the work	DT metering will start in phased manner along with RDSS smart meter installation scheme.												
		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	f. Yet to start the work	After the implementation of RDSS scheme, the information technology enabled system will be integrated to it.												
		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	g. DISCOM has energy audit cell. List is mentioned in the audit report. Certified energy auditor is present for the DISCOM.													

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 2026-27.
		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 Fy 26-27
		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 FY 26-27

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 43: Queries and replies to data gaps

Sl no	Query by EA	Response by EA of DISCOM	Notes by AEA
1	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.

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 6.64% and overall AT&C Loss is 6.94% for FY 2025-26. This reflects an overall collection efficiency of 99.68%. The detailed HT, LT and Transformer losses with respect to the input energy is shown in table below.

Table 44: Analysis on T&D losses

Particulars	Units	Values**
Total energy purchased	MU	180.033
Total energy sales	MU	168.078
Quantum of losses at HT level	MU	0.076
	%	0.042
Quantum of LT level losses (LT level and Transformer losses)	MU	11.880
	%	6.60
Total losses	MU	11.956
	%	6.64
Collection efficiency	%	99.68
AT & C loss	%	6.94

****Values with full decimal places.**

ANNEXURE: COLLECTED DATA

1. ABOUT THE ACCREDITED ENERGY AUDIT FIRM

Athul Energy Consultants Pvt Ltd (AEC) is an Empaneled Accredited Energy Auditing Firm (EmAEA-091) recognized by BEE and also empaneled with Energy Management Centre (EMC), Govt of Kerala. Established in 2010 as Athul Engineering Systems and Energy Consultants, (AEC since 2016), is one of the leading consultancy firms concentrating mainly in Energy and safety audits across pan India. The motto of AEC is to deliver services at quality and in time. The basic priority given is for energy conservation and sustainable development. AEC is empaneled with BEE in two sectors DISCOM and Refinery.

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

TABLE 45: CONTACT DETAILS OF AEA & CEA

Sr No	Name	Certification	EM/EA/AEA/Registration No	Phone no	Email
1	Mr. Santhosh A	• Accredited Energy Auditor	AEA 0275	7356111990	santhosh@athulenergy.com
2	Ms. Gayatri Nair R	• Sector Expert	EA – 5918	8129770346	info@athulenergy.com
3	Mr. Ashok K M P	• Certified Energy Auditor	EA-34760/22	7356111991	ashok@athulenergy.com
4	Ms. Della David	• Certified Energy Auditor	EA 34867/22	7356111992	della@athulenergy.com
5	Ms. Keerthana K	• Certified Energy manager	EM – 11843/23	7356111995	keerthana@athulenergy.com

2. CHECKLIST PREPARED BY AUDITING FIRM

1. KSEB bill –FY 2025-26 – 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 31st July 2026 to 01st August 2026 for the field study and the activities carried out during the study is given in the table below.

Table 46: 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

- 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.
 - 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
 - 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.
- Collection and Review of the energy related data of last Financial Year (FY) in the Proforma by visiting the DISCOM physically.
- Verification of existing pattern of energy distribution across periphery of electricity distribution company
- 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, Athul Energy, 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 loose 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.

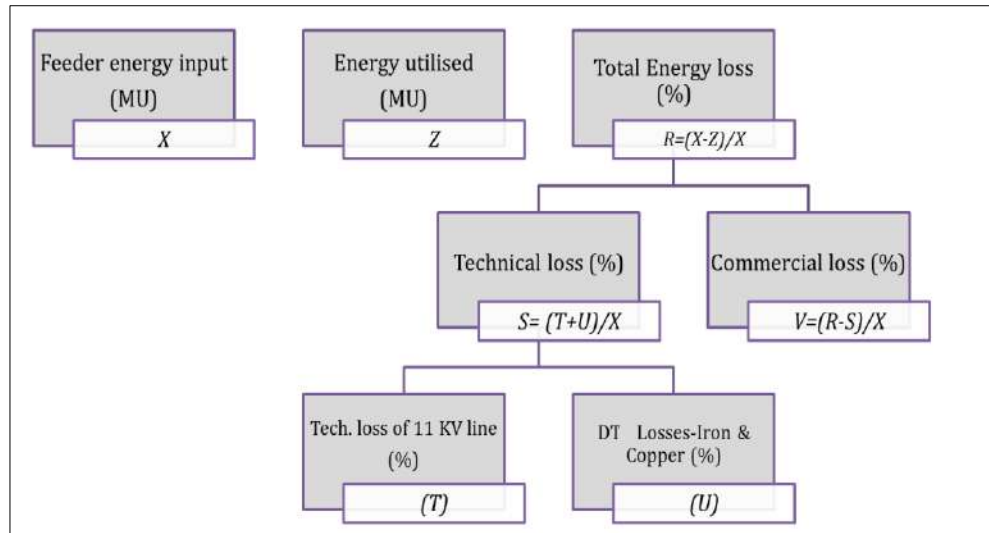


Figure 26: Schematic representation of technical losses

Commercial losses

- Mistakes in the billing.
- Meters not recording (MNR)
- Meters not recording correctly
- Meters by 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

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

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

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

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

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

LT cable line losses are calculated as follows:

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

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

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

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 $\left(\frac{kWh}{month}\right) + LT \text{ cable losses } \left(\frac{kWh}{month}\right) \dots\dots\dots(6)$

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

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 $\left(\frac{kWh}{month}\right) \dots\dots\dots(8)$

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:

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

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 $I = \frac{\text{average monthly kWh recorded at HT metering side}}{24 * 30 * 11 * \sqrt{3}} \dots\dots\dots(10)$

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

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

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

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

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 =

$$\begin{aligned} & \text{The total monthly average energy transmitted from the feeder incomer (kWh/month)} \\ & = \text{Total monthly average energy transmitted from the pole at switching station} \\ & + \text{HT cable losses} \end{aligned}$$

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.

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

LIST OF INSTRUMENTS

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

Table 47: 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 48: 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	18 feeders out of 18
v	Number of DTs	515	515	515	
vi	Number of consumers	43392	43392	43392	
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	-	-	141	35121
vi	Number of unmetered consumers	-	-		
vii	Number of total consumers	-	-	141	43251
b.i.	Number of conventionally metered Distribution Transformers	-	-	-	363
ii	Number of DTs with communicable meters	-	-	-	-
iii	Number of unmetered DTs	-	-	-	152
iv	Number of total Transformers				515
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	179.36	287.95
e.	Length of Aerial Bunched Cables			1.85	-
f.	Length of Underground Cables		2.57	71.83	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 180 MU. TCED has its own 110 kV, 66 kV and 33KV substations with 515 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 49: 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 2025-26 period under the 110-kV substation, 07 in 66 kV and 4 in 33 kV substation. The feeders are:

Table 50: 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 51: 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 52: TCED Distribution –line details

Sl. No	Feeder	HT							
		OH Line Length	UG Cable length						
			95 mm ²	150 mm ²	185 mm ²	240 mm ²	300 mm ²	400 mm ²	ABC - 120 mm ²
		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 53: 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 45 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:

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

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 10.26/kWh**.

TABLE 54: AVERAGE BILLING RATE – CATEGORY OF CONSUMER WISE

Category	Tariff	MU	Rs in crore	ABR (Rs/kWh)
Residential	LT 1A	40.67	31.40	7.72
Agricultural	LT V	0.05	0.03	5.92
Commercial/Industrial-LT	LT IV, VII	76.06	87.30	11.48
Commercial/Industrial-HT	HT IA, HT 4A,4B,SPS	50.04	53.00	10.59
Others	HT 2A,2B	1.26	0.68	5.43

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:

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

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 2025-26 is calculated value from the electricity purchase and could vary after the trueing up.

Table 55: 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
2025-26	177.18	13840.08	7.81

**Total input energy purchased (MU) = Input energy (MU) at the 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 56: 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	182.49	16444.53	16602.67	9.01	9.10	-0.09
2025-26 ¹	177.18	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 2024-25

¹ Data not availed during the period of audit.

7. SINGLE LINE DIAGRAM

110 KV & 66 KV SUBSTATION

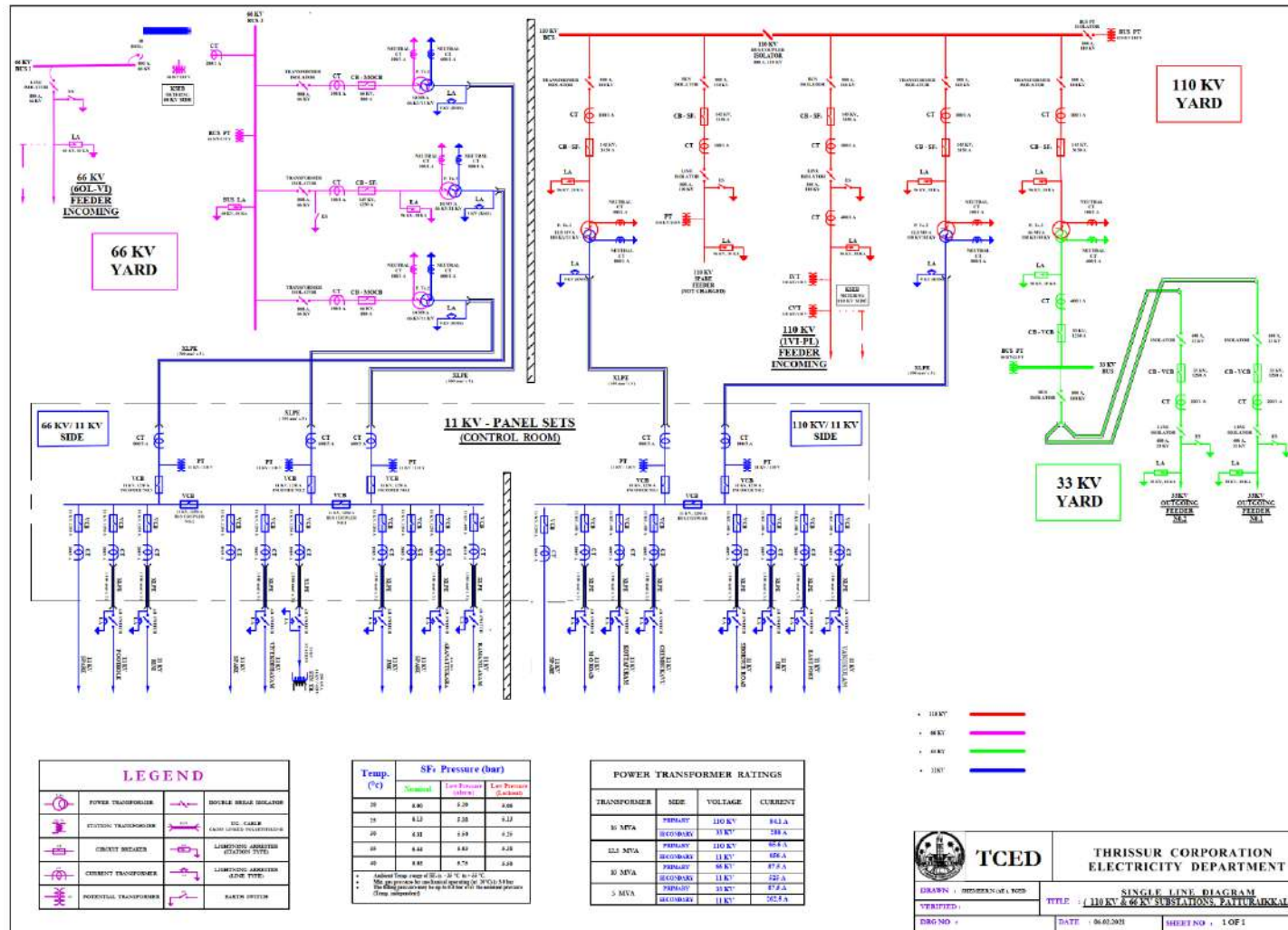


Figure 27: 110 kV & 66 kV substation

33 KV SUBSTATION

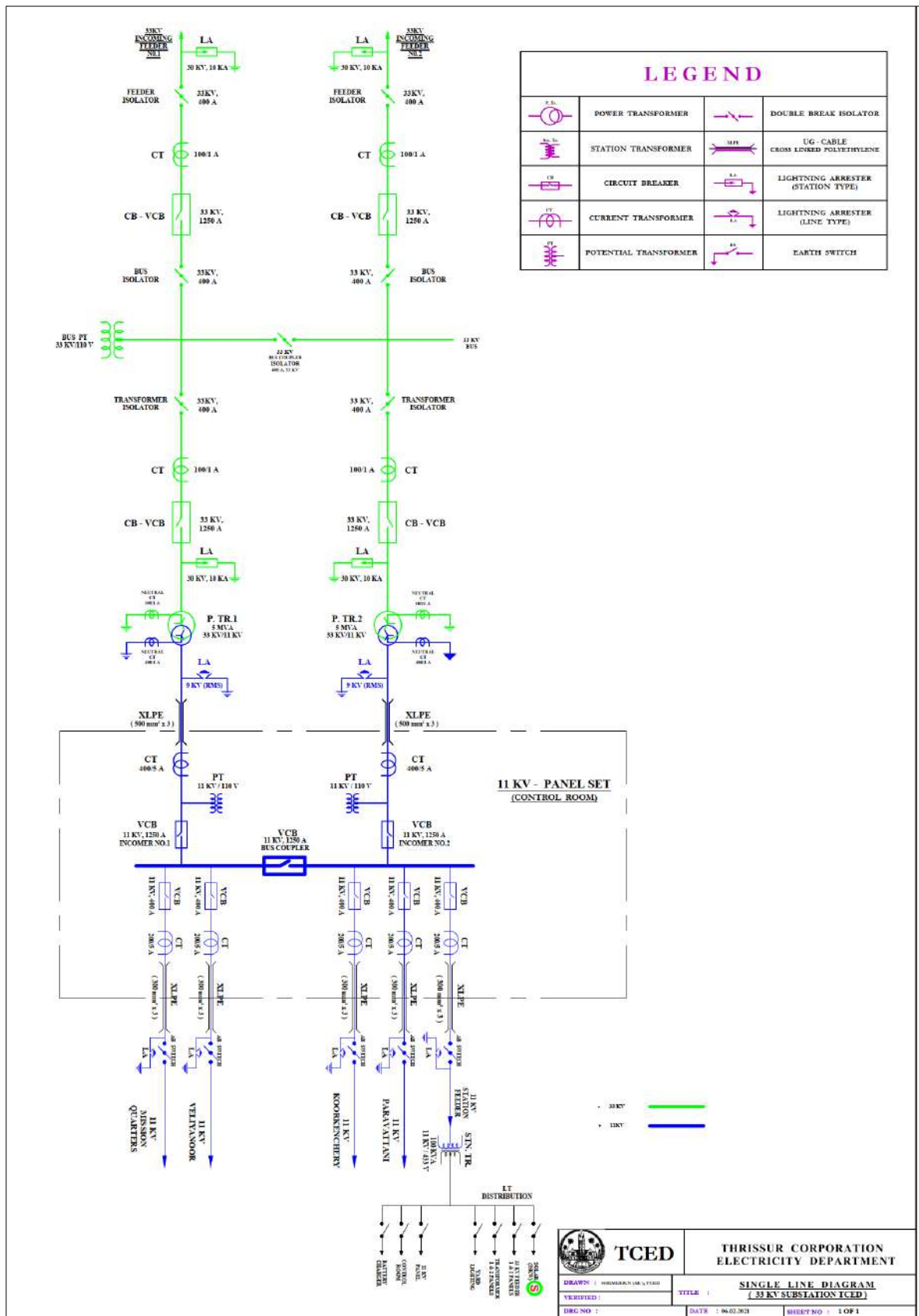


Figure 28: 33 kV substation

8. CATEGORY OF SERVICE DETAILS

DETAILS OF CONSUMERS AND CONSUMPTION

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

Table 57: Details of consumers and consumption

Summary of Energy						
Period from 1st April 2025 to 31st March 2026						
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	23,411	40.665	LT 1A
2	Commercial	LT	0.415	18,360	69.762	
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	388	1.259	VIII B
9	HT Water Supply					
10	HT Industrial	HT	11	5	0.963	HT 1A
11	Industrial (Small)	LT	0.415	465	3.649	LT IV
12	Industrial (Medium)					
13	HT Commercial	HT	11	97	28.202	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	453	2.652	
19	HT general	HT	11	31	18.113	HT 2A,2B
20	Agriculture	LT	0.415	174	0.046	LT V
21	Government offices and department	HT	11	8	2.767	
	Total			43,392	168.078	

DIVISION WISE STATUS OF DT LEVEL METERING

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

Table 58: 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 unmetred 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	35	3		32		32	
TCED	TCED		Veliyanoor	19	6		13		13	
TCED	TCED		Koorkenchery	25	6		19		19	
TCED	TCED		Paravattani	25	6		19		19	
TCED	TCED		Arnattukkara	35	6		29		29	
TCED	TCED		Jubilee Mission	Dedicated HT feeder						
TCED	TCED		Vivekodhayam	24	10		14		14	
TCED	TCED		Bini	18	7		11		11	
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	43	8		35		35	
TCED	TCED		Chembukavu	26	7		19		19	
TCED	TCED		Shornur Road	45	17		28		28	
TCED	TCED		District Hospital	35	16		19		19	
TCED	TCED		East Fort	33	7		26		26	
TCED	TCED		Vanjikulam	28	6		22		22	

DETAILS OF DT WISE LOSSES

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

Table 59: 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

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 60: List of Documents verified

FY 2025-26 Data Verification		
Sl No	Name	Name Supporting Document
Input Energy		
1	Input Energy (MU)	Electricity bill of FY April 2025-March 2026 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 2025-26

Trichur Corporation Electricity Department			
Balance Sheet as on 31.03.2026			
PARTICULARS	SCHEDULE NO.	As at 31.03.2026	As at 31.03.2025
SOURCES OF FUNDS			
(1) Owner's Funds		1,08,75,41,111	1,07,52,17,603
Capital Account		40,40,60,306	40,40,60,306
Reserves & Surplus	1	68,34,80,805	67,11,57,297
(2) Consumer Contribution		13,99,33,338	9,00,74,216
TOTAL		1,22,74,74,449	1,16,52,91,819
APPLICATION OF FUNDS			
(1) Net Fixed Assets		32,52,57,592	34,02,87,060
(a) Gross Block	2	76,52,34,226	75,21,98,344
(b) Less : Accumulated Depreciation	2	43,99,76,634	41,19,11,284
(c) Net Block	2	32,52,57,592	34,02,87,060
(d) Capital Work in Progress			
(2) Current Assets, Loans & Advances		1,79,25,38,629	1,67,94,13,756
(a) Inventories	3	33,76,183	26,44,577
(b) Sundry Debtors		24,41,62,866	19,61,79,969
Less : Provision for Doubtful Debts		-	-
Net Sundry debtors		24,41,62,866	19,61,79,969
(c) Loans and Advances	4	1,03,84,35,495	94,21,80,325
(d) Interest Accrued on Investments		4,19,35,311	3,42,50,625
(e) Cash and Bank Balance	5	45,93,25,370	50,41,58,260
(f) Other Current Asset	6	53,03,404	-
Less : Current Liabilities and Provisions	7	89,03,21,772	85,44,08,997
Net Current Assets		90,22,16,857	82,50,04,759
TOTAL		1,22,74,74,449	1,16,52,91,819

Figure 29 :Balance sheet – FY 2025-26

Source: Submitted FY 2025-26

PROFIT & LOSS STATEMENT - FY 2025-26

Trichur Corporation Electricity Department			
Income & Expenditure as on 31.03.2026			
PARTICULARS	SCHEDULE NO.	Year Ended 31st March 2026	Year Ended 31st March 2025
INCOME			
Revenue from Sale of Power	8	1,63,44,72,359	1,60,22,58,932
Other Income	9	4,43,06,199	5,90,64,913
TOTAL INCOME		1,67,87,78,558	1,66,13,23,845
EXPENDITURE			
Purchase of Power - Bulk Supply		1,37,63,68,489	1,39,93,79,144
Employee Costs	10	11,53,80,118	12,37,97,665
Repairs & Maintenance Expenses	11	78,10,875	1,69,41,985
Administration and General Expenses	12	10,56,61,702	3,48,22,244
Depreciation	2	2,80,65,350	1,76,15,195
Interest and Finance Charges	13	3,08,08,343	3,13,49,859
Employee compensation		11,74,607	-
Provisions		-	1,27,50,000
Miscellaneous Expenses	14	11,85,566	
TOTAL EXPENDITURE		1,66,64,55,050	1,63,66,56,091
Net Profit / (Loss) for the period		1,23,23,508	2,46,67,753
Return on equity		-	-
Balance carried forward to Balance Sheet		1,23,23,508	2,46,67,753

Figure 30: Profit & loss statement

Source: submitted FY 2025-26

ELECTRICITY BILL - KSEBL

KERALA STATE ELECTRICITY BOARD LIMITED

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

DEMAND CUM DISCONNECTION NOTICE FOR APRIL 2026

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

Cons#	1236680102381	Bill Date	10-Apr-2026	Due Date	17-Apr-2026	DC Date	02-May-2026	Bill No	11028113137661 Ver. 0
LCN	21/1029/THR	Tariff	Licensee: Thrissur Corporation			CD	119172000 BG 119172000		
THRISUR CORPORATION ELECTRICITY DEPARTMENT ELECTRICITY DEPARTMENT, CORPORATION OFFICE, PATTURACKAL, Thrissur., 680002 Mobile no--9446143072						SBI Virtual A/c No(IFS Code:SBIN0070493)- Multiple Reading Billing Consumer GSTIN_ID -KSEB (L)GST ID=32AAECK2277NBZ1 TDS u/s 194C - 132018.79			
Arrears as on 28-Feb-2026				Date of Previous Reading		28-Feb-2026		electricitydepartment@yahoo.co.in	
Disputed				Date of Present Reading		31-Mar-2026		Supply Voltage	
Contract Demand(KVA)		75% of CD (KVA)		130% of CD (KVA)		Connected Load (KW)		Billing Type	
45000.0		33750.0		58500.0		0		Non-DPS	
				Average		Consumption (kWh)		PF	
				MD (kVA)		35114.42		14744280	
				0.97		Circle		Transmission Circle,	

Reading Details of meter MAIN METER 110kV-Working (KVA,KWh,KVAh & KVArh) for 03-2026														
1. Energy Consumption(KWh)					3. Energy Consumption(KVArh) Lag and kVArh (Lead)									
Zone	FR	IR	MF	Units	Zone	FR	IR	MF	Units	FR	IR	Units		
1	0.00	0.00	200.000	9127600	1	0.00	0.00	200.000	2429600	0.00	0.00	0		
2	0.00	0.00	200.000	3460800	2	0.00	0.00	200.000	761000	0.00	0.00	0		
3	0.00	0.00	200.000	4350800	3	0.00	0.00	200.000	866800	0.00	0.00	0		
Total				16938800	Total kVArh(Lag)				4057400	kVArh(Lead)				
2. Energy Consumption(KVAh)					4. Demand (KVA)			Readings		MF		Units		
Zone	FR	IR	MF	Units	1		2		201.152		200.000		40230.0	
1	0.00	0.00	200.000	9447600	2		183.455		200.000		200.000		36691.0	
2	0.00	0.00	200.000	3544000	3		144.948		200.000		200.000		28990.0	
3	0.00	0.00	200.000	4436800	5.Factory Lighting								0.0	
Total				17428400	6.Colony Lighting								0.0	
Ave.PF=KWh/KVAh				0.97	7.Generator								0	

INVOICE					
	Unit	Rate	Amount (Rs)	Amount	
1.Total Demand Charge				9.Other Charges	
a. Demand Charge	40230.0	425.000	17097750.00	Meter Rent	1000.00
b.	0.0	425.000	0.00	Central GST Amount@9%	0.00
c.	0.0	425.000	0.00	State GST Amount@9%	0.00
d. Excess Demand Charge	0	212.500	0.00	Reconnection Fee	0.00
e.		212.500	0.00	Kerala Flood Cess	0.00
f.		212.500	0.00	Green Energy Charge	49571.83
Sub Total (a+b+c+d+e+f)			17097750.00		
2.Total Energy Charges					
a. Energy charges	16938800	6.85000	116030780.00		
b.		10.2750	0.00		
c.		5.13750	0.00		
Sub Total(a+b+c)			116030780.00		
3.PF Incentive / Disincentive				-1160307.80	
Total Energy Charge			114870472.20		
4.Energy Charges on Lighting load					
a.Factory Lighting	0	0.1		10.Total(add 1 to 9)	
b.Colony Lighting	0	0.1	0.00	Plus/Minus (Round off)	
Sub Total(a+b)				-0.03	
5.Electricity Duty				UnDisputed Am Amount	
6.Ele. Surcharge (*)	16938800	0.025		ACD, FY Assessment	
7.Duty on self generated energy	0	0.15	0.00	Less 1. Advance / Credit	
8.Penalty for non-segn. of light load				2. CD Interest	
				3. CD/Oth Ref	
				0.00	
				0.00	
				Net Payable	
				132018794.00	
(Rupees Thirteen Crore Twenty Lakh Eighteen Thousand Seven Hundred Ninety Four 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 DC					
1236680102381		11028113137661		Rs.132018794.00	
THRISUR CORPORATION ELECTRICITY DEPARTMENT					
DD/Payment Instruction		Name of the		Date	
				Signature	

MONTHLY ENERGY BILL DETAILS – FY 2025-26

Table 61: Energy bill summary – FY 2025-26

CONSUMER	THRISSUR COPRATION ELECTRICITY DEPARTMENT					SUPPLY VOLTAGE		110KV/EHT	CONSUMER NO:		LCN :21/1029/THR		
Month	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Average
75% OF CD	33,750	33,750	33,750	33,750	33,750	33,750	33,750	33,750	33,750	33,750	33,750	33,750	
kVA Normal	35,682	40,315	34,059	30,236	32,798	33,638	34,761	34,481	32,784	32,609	35,467	40,230	34,755
kVA Peak	26,278	35,561	31,282	28,904	31,000	31,610	32,720	32,657	32,154	32,034	32,963	36,691	31,988
kVA Off Peak	39,549	26,598	21,695	18,583	20,247	20,657	21,509	21,675	20,235	21,393	23,518	28,990	23,721
CONTRACT DEMAND CHARGE	1,68,08,325	1,71,33,875	1,44,75,075	1,43,43,750	1,43,43,750	1,43,43,750	1,47,73,425	1,46,54,425	1,43,43,750	1,43,43,750	1,50,73,475	1,70,97,750	1,51,44,592
KWH NORMAL	90,02,400	92,63,800	77,21,000	75,45,600	81,03,200	80,37,000	86,18,600	80,37,400	77,09,400	79,15,600	74,97,200	91,27,600	82,14,900
KWH PEAK	32,10,000	31,73,800	27,49,800	27,11,800	29,11,400	29,12,400	30,95,400	29,69,000	30,00,800	30,06,800	28,74,200	34,60,600	30,06,333
KWH OFF-PEAK	41,44,200	39,95,200	31,26,000	30,14,000	32,10,000	33,79,600	35,33,600	34,38,400	33,66,000	35,00,600	34,67,200	43,50,600	35,43,783
TOTAL KWH	1,63,56,600	1,64,32,800	1,35,96,800	1,32,71,400	1,42,24,600	1,43,29,000	1,52,47,600	1,44,44,800	1,40,76,200	1,44,23,000	1,38,38,600	1,69,38,800	1,47,65,017
KWH CHARGE	11,20,42,710	11,25,64,680	9,31,38,080	9,09,09,090	9,74,38,510	9,81,53,650	10,44,46,060	9,89,46,880	9,64,21,970	9,87,97,550	9,47,94,410	11,60,30,780	10,11,40,364
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	-	-	-	-	-	-	-	-	-	-	-	-	-
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
Green energy charge	57,252	55,737	46,100	44,269	47,220	50,447	51,818	48,893	48,893	42,643	46,379	49,572	49,102
GRAND TOTAL	12,77,88,860	12,86,29,645	10,67,28,874	10,43,96,698	11,08,90,378	11,15,98,371	11,82,28,147	11,27,12,605	10,98,51,393	11,21,96,967	10,89,67,320	13,20,18,794	11,53,34,004

MINUTES OF THE MEETING

Minutes of Meeting of Mandatory Energy Audit visit
between
M/s Thrissur Corporation Electricity Department (TCED)
&
M/s Athul Energy Consultants Pvt Ltd (AEC)
at the Office of TCED

Project Name:	Mandatory Energy audit of TCED for FY 2025-6
Date of Meeting:	9 th July 2026

1.Details of Officials involved in the Study

Name	Designation	Organization
Mr. Jose T S	Electrical Engineer, Nodal officer	TCED
Mr. Nikhil B	Assistant Engineer, Energy Auditor	TCED
Ms. Deepa S	System Admin, Finance Manager	TCED
Mr. Santhosh A	Accredited Energy auditor	Athul Energy
Mr. Ashok K M P	Energy auditor	Athul Energy
Ms. Della David	Energy auditor	Athul Energy

At the outset of the meeting, Mr. Jose T S, welcomed all the members present in the meeting started with a brief introductory session.

The detailed scope of study was presented including collection of energy related data for FY 2025-26 in the sector specific pro-forma and the measurement at feeder input and main incomer were discussed. Sample measurement of HT consumers and Feeder meter were discussed and planned for the audit period.

After detailed deliberations following points were discussed

- DISCOM will provide all the required data from their billing software and necessary arrangement for the transportation of men and material.
- DISCOM will share copies of relevant authentic and certified documents as support to the mandatory energy audit.
- The filled in pro-forma will be authenticated by energy managers and head engineering.

Name : Jose T S
Designation : Electrical engineer
Organization : TCED

Signature


JOSE T.S
Electrical Engineer
Electricity Department
Thrissur Corporation
Tel: 2423554

Ashok K M P
Energy Auditor
Athul Energy Consultants Pvt Ltd




SIGNED PERFORMA FY 2025-26**➤ 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	THRISSUR		
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 2025 to 31-March-2026		

[Handwritten Signature]



Santhosh A
AEA- 0275, EmAEA 091

astced.lsgd@kerala.gov.in, N.K. KRISHNAKUMAR M.A., LL.M.
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Build. No. 743648
tcedea Phone - 0487 2422470
tcedea Mobile - 9037192013
tcedea Email : electricity.department@tcedea.co.in
tcedea P.O. : 680 001

[Handwritten Signature]
ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
THRISSUR MUNICIPAL CORPORATION

➤ Details of Division wise losses

Details of Division Wise Losses (See note below**)																						
				Division Wise Losses																		
S.No	Name of circle	Circle code	Name of Division	Consumer profile						Period From Apr 2025 to Mar 2026						Losses		Commercial Parameter		AT & C loss (%)		
				Consumer category	No of connections 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				T&D loss (ML)	T&D loss (%)	Billed Amount in Rs. Crore		Collected Amount in Rs. Crore	Collection Efficiency
													Input energy (MkWh)	Metered energy	Unmetered/assessment energy	Total energy						
1	TCED	TCED	TCED	Residential	23411	0	23411	54%	139.70	0	139.700	49.8%	46.67	0	46.67	24.12%	11.40	11.31	99.70%			
				Agricultural	174	0	174	0.40%	0.42	0	0.418	0.1%	0.05	0	0.05	0.03%	0.03	0.02	81.33%			
				Commercial/Industrial-LT	19278	0	19278	44%	94.14	0	94.137	33.6%	76.06	0	76.06	45.25%	87.30	86.85	99.48%			
				Commercial/Industrial-HT	141	0	141	0.32%	45.90	0	45.299	16.1%	50.04	0	50.04	29.77%	53.00	53.00	100.00%			
				Others	388	0	388	0.9%	0.93	0	0.932	0.3%	1.26	0	1.26	0.75%	0.68	0.68	99.53%			
				Sub-total	43892	0	43892	100%	180.99	0	180.99	100%	180.99	180.99	0	180.99	100%	11.954	6.64%	172.43	171.86	99.68%
2				Residential	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	0%	0	0	0	0%	0	0	0	0%	0	0%	0	0	0.00%	
76	Total			Residential	23411	0	23411	53.95%	139.70	0	139.700	49.8%	46.67	0	46.67	24.10%	11.40	11.31	99.70%			
				Agricultural	174	0	174	0.40%	0.42	0	0.419	0.1%	0.04	0	0.04	0.03%	0.03	0.02	81.33%			
				Commercial/Industrial-LT	19278	0	19278	44.43%	94.137	0	94.137	33.6%	76.06	0	76.06	45.25%	87.30	86.85	99.48%			
				Commercial/Industrial-HT	141	0	141	0.32%	45.299	0	45.299	16.1%	50.04	0	50.04	29.77%	53.00	53.00	100.00%			
				Others	388	0	388	0.89%	0.932	0	0.932	0.3%	1.26	0	1.26	0.75%	0.68	0.68	99.88%			
				Sub-total	43892	0	43892	100%	180.99	0	180.99	100%	180.99	180.99	0	180.99	100%	11.954	6.64%	172.43	171.86	99.88%

** 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 each category of consumer by the applicable rate of subsidy notified by the state government.

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

Authorized Signatory and Seal

Name of Authorized Signatory:

Name of the Director:

Full Address:-

Seal

Dr. N. K. KRISHNAKUMAR I.A., I.L.M.
 ASSISTANT SECRETARY
 ELECTRICITY DEPARTMENT
 THRISSUR CORPORATION
 and over Pen No: 743649
 and over Phone - 0467 2422470
 and over Mobile - 8821037758
 and over Email: electricitydepartment@thrisur.co.in
 and over Pin: 680 001

ASSISTANT ENGINEER
 ELECTRICITY DEPARTMENT
 THRISSUR MUNICIPAL CORPORATION

Signature:
 Name of Energy Manager:
 Registration Number:



Santhosh A
 AEA- 0275, EmAEA 091

➤ Details of infrastructure

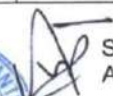
Form-Details of Input Infrastructure					
1	Parameters	Total	Covered during in audit	Verified by Auditor in Sample Check	Remarks (Source of data)
i	Number of circles	1	1	1	
ii	Number of divisions	1	1	1	
iii	Number of sub-divisions	1	1	1	
iv	Number of feeders	18	18	18	18 feeders out of 18
v	Number of DTs	515	515	515	
vi	Number of consumers	43392	43392	43392	
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	-	-	141	35121
vi	Number of unmetered consumers	-	-	-	-
vii	Number of total consumers	-	-	141	43251
b.i.	Number of conventionally metered Distribution Transformers	-	-	-	363
ii	Number of DTs with communicable meters	-	-	-	-
iii	Number of unmetered DTs	-	-	-	152
iv	Number of total Transformers	-	-	-	515
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	179.36	287.95
e.	Length of Aerial Bunched Cables	-	-	1.85	-
f.	Length of Underground Cables	-	2.57	71.83	4.53
3	Voltage level	Particulars	MU	Reference	Remarks (Source of data)
i	66kV and above	Long-Term Conventional	177.180	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	177.180		
		Power at state transmission boundary	177.180		
iii		Input in DISCOM wires network	177.180		
v	11 kV	Renewable Energy Procurement	0.367	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	2.486	Total LT banked units	
		Sales Migration Input	0		
vii		Energy Embedded within DISCOM wires network	2.85		

viii	Total Energy Available/ Input		180.033		
4	Voltage level	Energy Sales Particulars	MU	Reference	
i	LT Level	DISCOM' consumers	118.03	Include sales to consumers in franchisee areas, un-metered consumers	Total LT Sales
		Demand from open access, captive	0.00		
		Embedded generation used at LT level		Demand from embedded generation at LT level	
		Sale at LT level	118.03		
		Quantum of LT level losses	11.90	Included the LT OH line length, LT cable, Switch gear & Commercial losses	Manually calculated using distribution line length and feeder wise consumption
		Energy Input at LT level	129.94		
ii	11 kV Level	DISCOM' consumers	50.04	Include sales to consumers in franchisee areas, un-metered consumers	
		Demand from open access, captive	0.00	Non DISCOM's sales	
		Embedded generation at 11 kV level used		Demand from embedded generation at 11kV	
		Sales at 11 kV level	50.04		
		Quantum of Losses at 11 kV	0.05	EHT + HT losses	Manually calculated using distribution line length and feeder wise consumption
		Energy input at 11 kV level	50.10		
			Total Energy Requirement	180.033	
	Total Energy Sales	168.078			
Energy Accounting Summary					
5	DISCOM	Input (in MU)	Sale (in MU)	Loss (in MU)	Loss %
i	LT	129.94	118.03	11.905	9.16
ii	11 Kv	50.10	50.045	0.051	0.10
iii	33 kv				
iv	> 33 kv				
	Loss Estimation for DISCOM				
	T&D loss (MU)	11.956			
	D loss (MU)	11.956			
	T&D loss (%)	6.64			
	D loss (%)	6.64			


 എസ്. സി. മുഹമ്മദ്/ N. R. KRISHNAKUMAR IIA, I.L.M.
 അസിസ്റ്റന്റ് സെക്രട്ടറി/ ASSISTANT SECRETARY
 വൈദ്യുതി വിഭാഗം/ ELECTRICITY DEPARTMENT
 തൃശ്ശൂർ നഗരസഭ/ THRISSUR CORPORATION
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 ഇമെയിൽ/ Email: electricitydepartment@yahoo.co.in
 ഫാക്സ്/ Fax: 688 391


 ASSISTANT ENGINEER
 - ELECTRICITY DEPARTMENT
 THRISSUR MUNICIPAL CORPORATION




 Santhosh A
 AEA- 0275, EmAEA 091

➤ Form input energy

Form-Input energy(Details of input energy & Infrastructure)									
A. Summary of energy input & Infrastructure									
S.No	Parameters							Period from April 2025 to March 2026	Remarks (Source of data)
A.1	Input Energy purchased (MWh)							180.013	Electricity bill & meter input
A.2	Transmission loss (%)							0%	
A.3	Transmission loss (MWh)							0	
A.4	Energy sold outside the premises(MWh)							0.00	
A.5	Open access sale (MWh)							0	
A.6	DIT sale							0	
A.7	Net input energy (measured at HV/MV line periphery or at distribution point) (MWh)							180.013	Total net input
A.8	0.100% metering available at 66/33 KV (Subst. app or no from bus)							Yes	
A.9	0.100% metering available at 11 KV (Subst. app or no from bus)							Yes	
A.10	% of metering available at HT							98.79%	Sub out of 5.25 transformers
A.11	% of metering available at consumer end							50%	
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							3	Not available
A.16	Line length (km) at 66KV voltage level							0.2	Measured through HT line mapping
A.17	Line length (km) at 33KV voltage level							3.15.13	Measured through HT line mapping
A.18	Line length (km) at 11KV voltage level							287.95.9	Measured through LT line mapping
A.19	Line length (km) at LT level							1.00	Measured through HT line mapping
A.20	Length of Aerial Bunched Cables							61.34	Site measurement
A.21	Length of Underground Cables							3/1.30	
A.22	MVA/T ratio								

B. Meter reading of input energy at injection point										Period from April 2025 to March 2026				Sl. No - HT	Remarks (Source of data)						
S.No	Zone	Circle	Voltage Level (KV)	Substation (HT)	Sub-Station (HT)	Feeder ID	Feeder Name	Feeder Metering Station (Meters) (Meters)	Status of Meter (Functional/Non-functional)	Metering Date	Feeder Type (Agri/Industrial/Other)	% share received through meter/reading of feeder	Number of hours when meter was found to be operational in period			Total number of hours in the period	Meter S.No	CT/PT ratio	Input (MWh)	Input (MWh)	
B.1	TCED	TCED	110			21/Thiruv. corp	WPS	Metered	Functional	4/1/2025	Mixed	1	0	180	10005310	200/1	177.180	-	168.08	110 KV L/S	
B.2	TCED	TCED	66			Thiruv. corp	WPS	Metered	Functional	4/1/2025	Mixed	1	0	180	17051040	200/1	0.57	-	66 KV L/S		
B.3	TCED	TCED	0.425			Multiple Feeder	Multiple Feeder	Metered	Functional	4/1/2025	Mixed	1	0	180	-	-	2.49	-	Embedded Energy		
B.4	TCED	TCED	11			Multiple Feeder	Multiple Feeder	Metered	Functional	4/1/2025	Mixed	1	0	180	-	-	2.49	-	Embedded Energy		
B.101	Total (MWh)																	180.013	0.00		
B.102	Net input energy at DSCOM periphery (MWh)																		180.013		

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

Authorized Signatory and Seal
 Name of Authorized Signatory
 Name of the INCOB
 First Address:
 Seal

Signature:
 Name of Energy
 Registration Number:

എ. കെ. കൃഷ്ണകുമാർ / N. K. KRISHNAKUMAR M.A., LL.M.
 സഹസ്രീയ സെക്രട്ടറി / ASSISTANT SECRETARY
 വൈദ്യുതി വിഭാഗം / ELECTRICITY DEPARTMENT
 തൃശ്ശൂർ നഗരസഭ / THRISSUR CORPORATION
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 ഫാക്സ് / Fax : 800 001

ASSISTANT ENGINEER
 ELECTRICITY DEPARTMENT
 THRISSUR MUNICIPAL CORPORATION



Santhosh A
 AEA- 0275, EmAEA 091

[illegible]

B. Embedded Generation in DCOM Area																
S.No.	Name of Generation Station	Generative Capacity (In MW)	Type 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 MW)	Division Level Load (MW)	Received at Division Level (KV)	Received at Division Level (In MW)	Sub-Division Level (MW)	Received at Sub-Division Level (KV)	Received at Sub-Division Level (In MW)	Remarks (Source of data)
1	Own generation	1.15	Renewable	Not metering	Renewable Source	11		11	0.367							Manual measurement - Excel sheet
2	From Resonance	2.61	Renewable	Not metering	Renewable Source	33 KV		33 KV								Manual measurement - Excel sheet

Dr. K. P. S. S. S. S.



ASSISTANT ENGINEER
ELECTRICITY DEPARTMENT
TAMISSAR MUNICIPAL CORPORATION



Santhosh A
AEA- 0275, EmAEA 091

➤ 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	10.48	10.10		3.61	4.75	nil	
2	TCED						Veliyannor	Urban	Others	9.55	8.96		6.09	7.21	nil	
3	TCED						Koorkechery	Urban	Others	9.53	8.74		8.28	9.37	nil	
4	TCED						Paravattany	Urban	Others	9.83	9.63		2.04	3.20	nil	
5	TCED						Aranattukara	Urban	Others	11.63	11.31		2.70	3.86	nil	
6	TCED						JMC	Urban	Others	8.42	8.08		3.97	5.12	nil	
7	TCED						Vivekodhayam	Urban	Others	8.20	7.16		12.63	13.67	nil	
8	TCED						Bini	Urban	Others	6.38	5.99		6.17	7.28	nil	
9	TCED						Poonkunnam	Urban	Others	8.66	8.23		4.96	6.09	nil	
10	TCED						Keralavarma	Urban	Others	10.73	10.36		3.43	4.57	nil	
11	TCED						Ramanilayam	Urban	Others	8.73	7.93		9.12	10.20	nil	
12	TCED						M O Road	Urban	Others	12.84	12.53		2.41	3.57	nil	
13	TCED						Kottapuram	Urban	Others	5.99	5.71		4.73	5.86	nil	
14	TCED						Chembutkavu	Urban	Others	9.12	8.86		2.80	3.95	nil	
15	TCED						Shomur Road	Urban	Others	11.60	11.06		4.68	5.81	nil	
16	TCED						DH	Urban	Others	12.99	11.62		10.54	11.60	nil	
17	TCED						East Fort	Urban	Others	12.35	11.85		4.08	5.22	nil	
18	TCED						Vanjikulam	Urban	Others	9.25	9.05		2.17	3.34	nil	

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➤ 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	40,665,159	0	40665159	0	0	0	0	0	0	0	0	0	0	0
Agricultural	45,624	0	45624	0	0	0	0	0	0	0	0	0	0	0
Commercial/Industrial-LT	76,063,096	0	76063096	0	0	0	0	0	0	0	0	0	0	0
Commercial/Industrial-HT	50,044,612	0	50044612	0	0	0	0	0	0	0	0	0	0	0
Others + own consumption	1,259,078	0	1259078	0	0	0	0	0	0	0	0	0	0	0
Total	168077569		168077569											
*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														

[Signature]

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➤ 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	35	3		32		32				
TCED	TCED		Veliyanoor	19	6		13		13				
TCED	TCED		Koorkenchery	25	6		19		19				
TCED	TCED		Paravattani	25	6		19		19				
TCED	TCED		Arnattukkars	35	6		29		29				
TCED	TCED		Jubilee Mission	Dedicated feeder	Dedicated feeder	Dedicated feeder		Dedicated feeder					
TCED	TCED		Vivekodhayam	24	10		14		14				
TCED	TCED		Bini	18	7		11		11				
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	43	8		35		35				
TCED	TCED		Chembukavu	26	7		19		19				
TCED	TCED		Shornur Road	45	17		28		28				
TCED	TCED		District Hospital	35	16		19		19				
TCED	TCED		East Fort	33	7		26		26				
TCED	TCED		Vanjikulam	28	6		22		22				
b. Details of DT-wise losses													
Sub-station ID	Feeder ID	Feeder Name	DT Id so	DT Capacity (kVA)	Predominant consumer type of DT (Domestic/Industrial /A griculture/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)	Less 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													

n/k/m/you have

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12. ABBREVIATIONS

ABR	:	Average billing rate	TPEA	:	Third party energy auditor
ACSR	:	Aluminium core steel reinforced	UG	:	Underground
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			