

TAMILNADU POWER DISTRIBUTION CORPORATION LIMITED

ABSTRACT

Electricity – Chennai Region – Chennai EDC/North – Conversion of existing 33 kV overhead line with Dog Conductor into 33 kV, 1x630 Sq mm XLPE UG cable in the existing 33 kV Nappalayam feeder of Manali 110/33-11 kV SS - Administrative approval - Accorded.

TECHNICAL BRANCH

(Per). MD TNPDC Proceedings No. 61

Dated: 30.07.2026.

Parabhava Varudum,

Aadi : 14

Thiruvalluvar Aandu 2057.

READ: Chairman cum Managing Director's approval dated 24.07.2026.

PROCEEDINGS:

1. The Tamilnadu Power Distribution Corporation Limited hereby approves the proposal for conversion of existing 33 kV overhead line with Dog Conductor into 33 kV 1x630 Sq mm XLPE UG cable at an estimated cost of Rs.421.09 lakhs Gross and Rs.390.51 lakhs Nett. in the existing 33 kV Nappalayam feeder of Manali 110/33-11 kV SS in Chennai EDC/North of Chennai Region. The detailed estimate and report are annexed to these proceedings.
2. The expenditure is chargeable to TNPDC - Funds - Capital Expenditure – Chennai EDC/North - A/C code No: ERP 10 20 400.
3. By virtue of the provisions contained in sub-section (2) (a) of section 185 of the Electricity Act, 2003, the TNPDC being the Licensee and successor entity of Tamil Nadu Electricity Board will exercise the powers of the Telegraph Authority under the provisions of section 164 of the Electricity Act, 2003, which have already been conferred upon the Board under section 51 of the Indian Electricity Act, 1910.
4. The work is to be taken up after ensuring budget provision.

// BY ORDER OF THE CMD//

J.PUSHPALATHA
CHIEF ENGINEER/PLANNING & RC

Encl: Report and detailed estimate.

To

The Chief Engineer/Distribution/Chennai Region

(Per).MD.TNPDCL Proceedings No.61, dated: 30.07.2026.

Copy to:

The Director/Distribution/TNPDCL

The Director / Finance / TNPDCL

The Chief Engineer/ Material Management

The Superintending Engineer/Chennai EDC/North

The Superintending Engineer/CDC

The Superintending Engineer/RE&ID/Chennai.

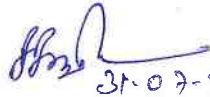
The Company Secretary/TNPDCL, Chennai.

The Resident Audit Officer (AGO'S Unit) / Chennai.

B.P.Section (Administrative Branch)

Stock file.

//FORWARDED BY ORDER//



31.07.2026

Executive Engineer/Master Plan - I

REPORT TO ACCOMPANY THE ESTIMATE

This proposal envisages conversion of existing 33 kV overhead line with Dog Conductor into 33 kV 1x630 Sq mm XLPE UG cable in the existing 33 kV Nappalayam feeder of Manali 110/33-11 kV SS in Chennai EDC/North of Chennai Region at an estimated cost of Rs.421.09 lakhs Gross and Rs.390.51 lakhs Nett.

Need:

At present, Nappalayam 33/11 kV SS is in service with 2x16 MVA Power Transformers. The peak reached in the above Power Transformers are 13.794 MVA & 10.545 MVA and are loaded to 86.21% & 65.91% respectively.

The existing 16 MVA Power Transformer I at Nappalayam 33/11 kV SS is fed through 33 kV Manali – Nappalayam feeder. The above feeder is with overhead line with Dog conductor (current carrying capacity – 17.78 MVA) and UG cable is available in the above feeder for a distance of 0.26 kms. at four locations.

The existing 16 MVA Power Transformer II at Nappalayam 33/11 kV SS is fed through 33 kV Melur – Nappalayam feeder. The above feeder is with 33 kV, 1x630 Sq. mm. UG cable (current carrying capacity – 32 MVA).

SIDCO Industrial Estate at Vichoor area is being fed from the existing Nappalayam 33/11 kV SS. Since being overhead line, frequent breakdowns occurs in the above existing 33 kV Manali – Nappalayam feeder, resulting in interruption to the above industrial estate.

In the past three years, breakdowns had occurred 110 times in 33 kV Manali – Nappalayam feeder, which resulted in total supply interruption for a duration of nearly 470 hrs. which leads to revenue loss.

Frequent representation are being received from M/s.Vichoor Industrial Estate and Manufacturer's Association requesting to maintain uninterrupted power supply to their Industrial Estate. Since being revenue fetching services, it is essential to maintain uninterrupted power supply to the above industrial estate.

Under the above circumstances, in order to ensure uninterrupted and reliable power supply to Vichoor Industrial area and the other areas fed by Nappalayam 33/11 kV SS, conversion of existing overhead line with Dog conductor in 33 kV Manali – Nappalayam feeder into 33 kV, 1x630 Sq. mm. UG cable is essential.

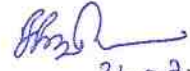
The road cut restoration charges and labour charges for trenchless technology have been adopted as per the prevailing Chennai EDC schedule of rates in cost data. The executing wing is

requested to adopt the road cut restoration charges as per the actual road type applicable at the time of execution of the work.

In this regard, the Chief Engineer/Distribution/Chennai Region has reported that as the existing 33 kV UG cable in the existing 33 kV Manali – Nappalayam feeder (0.6 kms.) at 3 different locations are running 3 meters below the existing road surface where heavy vehicle movement exists, the same is irretrievable. The existing 33 kV, 1x630 Sq.mm. UG cable between Manali 110 kV SS to the existing 1st point DP structure in 33 kV Manali – Nappalayam feeder is proposed to be retained and utilized.

Details of work involved:

- Laying of 33 kV, 1x630 Sq.mm XLPE cable (3 runs) from 1st point DP structure near Manali 110 kV SS to the existing Nappalayam 33/11 kV SS for a route length of 4.13 kms.
- Erection of DP structure at 3 locations.
- Dismantling of 33 kV overhead line with Dog conductor for a route length of 4.03 kms.


31.07.2026

EXECUTIVE ENGINEER/MASTER PLAN-I

Conversion of existing 33 kV overhead line with Dog Conductor into 33 kV 1x630 Sq mm XLPE UG cable in the existing 33 kV Nappalayam feeder of Manali 110/33-11 kV SS in Chennai EDC/North of Chennai Region

Part - I : Cost of new asset

Sl.No.	Description	Quantity		Rate/Per		Rs. In lakhs
						Amount
1	33 kV 1x630 Sq.mm. XLPE UG cable	12.39	kms.	15.2350	Km	188.76
2	33 kV 1x630 Sq.mm. outdoor termination kit (HS)	18	Nos.	0.08614	Nos.	1.55
3	33 kV 1x630 Sq.mm. Straight Joint Kit (HS)	24	Nos.	0.1038	Nos.	2.49
4	33 kV 1x630 Sq.mm Indoor termination Kit (HS)	3	Nos.	0.05640	Nos.	0.17
5	Sub-total					
6	Contingencies 1%					192.97
7	Sub-total					1.93
8	Labour charges for cable laying by Trenchless Method (4100 mtrs. x Rs.3400)					194.90
9	HTUG feeder erection (Running metre cable*892+Kit*2500+ Transport @1%)					139.40
10	Sub-Total					1.39
11	Establishment and supervision charges 15%					335.69
12	GST on Labour & Charges @18%					50.35
13	Erection of 33 kV DP Structure					25.34
14	Dismantling Charges	3	Loc	2.725	Loc	8.18
15	Gross					1.53
16	Less credit					421.09
17	Nett					30.59
						390.51

Part I (a) : Dismantling Charges

1.53

PART II Accumulated depreciation charges

SL. No.	DESCRIPTION	Original cost	Full Life Period	Useful Life Period	Accumulated depreciation
1	33 kV line with Dog conductor	30.59	35	20	15.73
2	Total				15.73

Part III : Devolution of old equipment to store

Part III:Part IV - Part II =

$$30.59 - 15.73 = \mathbf{14.86}$$

Part IV : Removal of old assets Charges

SL. NO	Name of the item	QTY	Original Cost in Lakhs	Original Erection Charges 10%	Original Centages 15%	Original Cost of Asset
1	33 kV line with Dog conductor	4.03 kms.	24.18	2.418	3.9897	30.588
2	Total					30.59

** 50% of present cost data rate has been adopted

ABSTRACT

Part I : New Asset Chargeable to Capital

Part I (a) : Dismantling Charges

Part II : Accumulated Depreciation Charges

Part III:Devolution of old equipment to store

Part IV : Removal of old assets Charges

Rs.in Lakhs

421.09 Gross

390.51 Nett

1.53

15.73

14.86

30.59

[Signature]
31.03.2026
Executive Engineer/Master Plan I

