

TAMIL NADU TRANSMISSION CORPORATION LIMITED
ABSTRACT

TANTRANSCO – Replacement of existing defective 16 MVA, 110/11 kV Power Transformer by a healthy one and ratification for having replaced the same at Vadakuthu 110/33-11 kV SS in Villupuram Operation Circle (Cuddalore EDC) of Villupuram Region – Administrative approval – Accorded.

TECHNICAL BRANCH

(Per) CH TANTRANSCO Proceedings No.41

Dated: 08.05.2026
Parabhaava Varudam
Chithirai - 25
Thiruvalluvar Aandu-2057

READ: Chairman's approval dated 09.04.2026

PROCEEDINGS:

1. The Tamil Nadu Transmission Corporation Limited hereby approves the administrative approval for replacement of existing defective 16 MVA, 110/11 kV Power Transformer by a healthy one and ratification for having replaced the same at Vadakuthu 110/33-11 kV SS in Villupuram Operation Circle (Cuddalore EDC) of Villupuram Region at an estimated cost of Rs.117.185 lakhs Gross and Rs.61.247 lakhs Nett. The detailed estimate and report are annexed to these proceedings.
2. The expenditure is chargeable to "TANTRANSCO" – Funds - Capital Expenditure - Villupuram Operation Circle (Cuddalore EDC) – A/c. Code No.1020400.
3. By virtue of the provisions contained in sub-section (2) (a) of section 185 of the Electricity Act, 2003, TANTRANSCO being the Transmission utility, 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.

// BY ORDER OF THE CHAIRMAN//

J.PREMALATHA
CHIEF ENGINEER /TRANSMISSION

Encl: Report and detailed estimate.

To

The Chief Engineer/Distribution/Villupuram Region

(Per) CH TANTRANSCO Proceedings No.41, dated :08.05.2026

Copy to:

The Managing Director/TANTRANSCO/Chennai-2

The Director/Distribution/TNPDCL/Chennai-2

The Director/Transmission Projects/TANTRANSCO/Chennai-2

The Director/Operation/TANTRANSCO/Chennai-2

The Director/Finance/TANTRANSCO/Chennai-2

The Chief Engineer/Transmission/Chennai -2

The Chief Engineer/Transmission Projects /Trichy

The Superintending Engineer/Operation/Villupuram

The Superintending Engineer/Cuddalore EDC

The Superintending Engineer/GCC/Trichy

The Superintending Engineer/Transmission -I/Chennai -2

The Superintending Engineer/Transmission -II/Chennai -2

The Superintending Engineer/System Studies/Chennai -2

The Resident Audit Officer (AGO'S Unit)/Chennai -2

B.P.Section (Administrative Branch)

Stock file

//FORWARDED BY ORDER//

[Handwritten Signature]
08/05/2026

EXECUTIVE ENGINEER/MASTER PLAN II

REPORT TO ACCOMPANY THE ESTIMATE

This proposal envisages replacement of existing defective 16 MVA, 110/11 kV Power Transformer by a healthy one and ratification for having replaced the same at Vadakuthu 110/33-11 kV SS in Villupuram Operation Circle (Cuddalore EDC) of Villupuram Region at an estimated cost of Rs.117.185 lakhs Gross and Rs.61.247 lakhs Nett.

Need:

At present, Vadakuthu 110/33-11 kV SS is having 1x16 MVA, 110/33 kV power transformers and (1x16 +1x10) MVA, 110/11 kV power transformers. The 16 MVA, 110/11 kV 'VOLTAMP' make power transformer bearing serial No.2854/2 was in service at Vadakuthu 110/33-11 kV SS from 18.05.2015.

The year of manufacture of the above power transformer I is 1992 and has served for about 33 years.

On 17.05.2025 at 16.09 hrs, the LV-I , LV II and GC Breaker of 16 MVA, 110/33 kV power transformer I got fault tripped due to actuation of Differential relay trip with Y & B flag indication alongwith Buchholz relay alarm and Master relay and gas collection observed in the Buchholz relay gas chamber.

The MRT wing examined all the protection circuits on 19.05.2025 and reported that the protection circuit are found intact and fault in Magnetizing circuit and suspected fault in LV 'Y' phase winding and test results were not satisfactory. DGA test results of R&D wing, revealed abnormal development of fault gases compared to previous test results which could have been due to development of suspected high energy thermal/arcing fault and hence recommended for internal examination of the power transformer.

Internal examination was conducted on 20.05.2025 and it was found that the formation of fault gases was attributed to the thermal damage due to burning of the core earth copper strip and also the suspected fault in LV Y phase winding and short circuit between the LV winding and the core, fault could not be rectified at site.

As the above defects could not be rectified at site, the failed power transformer has been lifted on 11.10.2025 by the repair contractor for carrying out rectification work at their site.

In order to normalize the supply, the defective unit was replaced by another healthy 16 MVA, 110/11kV 'SPEC' make power transformer (SI.No. ST- 44143) of same capacity on 06.06.2025. Hence, this proposal has been evolved to regularize the replacement made already.

Details of works:

- Erection of 1 No. healthy 16 MVA, 110/11 kV Power Transformer at the existing Vadakuthu 110/33-11 kV SS.
- Dismantling of 1 No. defective 16 MVA, 110/11 kV power transformer at the existing Vadakuthu 110/33-11 kV SS.

J. V. S.
03/05/2026
EXECUTIVE ENGINEER/MASTER PLAN II

ESTIMATE FOR THE REPLACEMENT OF EXISTING DEFECTIVE 16 MVA, 110/11 KV POWER TRANSFORMER BY A HEALTHY ONE AND RATIFICATION FOR HAVING REPLACED THE SAME AT VADAKUTHU 110/33-11 KV SS SS IN CUDDALORE EDC OF VILLUPURAM REGION

Rs in lakhs

Part - I: Cost of new asset

SL.N O	DESCRIPTION	QTY	RATE	PER	AMOUNT
1	16 MVA, 110/11 kv power transformer (PO.TR.2457/2013)	1 No.	98.693	E	98.693
2	Cost of materials				98.693
3	Labour & Transport charges	actuals			3.106
4	Sub total				101.799
5	Establishment & Supervision charges @ 15 % (Power Transformer only)				14.804
6	Dismantling charges	actuals			0.582
7	Gross				117.185
8	Less credit				55.938
9	Nett				61.247

0.582 Lakhs

Part I(A):Dismantling charges

Part II:Accumulated Depreciation

SL. No.	Name of the item	Original cost	Total life in years	Life served in years	Accum. depre. 0.9(CI.3xCI.5/CI.4)
1	16 MVA, 110/11 kv Power Transformer	55.938	25	25	50.344
		55.938			50.344

Part III: Devolution of old equipment to stores

Part IV - Part II = 55.94 - 50.34 = 5.59 lakhs

Part IV: Removal of old asset

Rs. in lakhs

SL. NO	Name of the item	QTY	Original Cost	Original Erection Charges 10%	Original Centages 15%	Original Cost of Asset
1	16 MVA, 110/11 kv power Transformer (Make-VOLTAMP,P.O.No. 1319, dt. 02.01.1991) Cost data - 1991-92)	1	44.220	4.422	7.296	55.938
	Total					55.938

ABSTRACT

Part - I:Cost of new asset

RS IN LAKHS

GROSS 117.185

NETT 61.247

Part I(A):Dismantling charges

0.582

Part II:Accumulated Depreciation

50.344

Part III: Devolution of old equipment to stores

5.594

Part IV: Removal of old asset

55.938

J. King
08/08/2014
EXECUTIVE ENGINEER/MASTER PLAN II