

TAMIL NADU TRANSMISSION CORPORATION LIMITED
ABSTRACT

TANTRANSCO – Replacement of failed 1No. 16 MVA, 110/33 kV Power Transformer I by a healthy one and ratification for having replaced the same at Manapparai 110/33-11 kV SS in Trichy Operation Circle (Trichy Metro EDC) of Trichy Region – Administrative approval – Accorded.

TECHNICAL BRANCH

(Per) CH TANTRANSCO Proceedings No.49

Dated: 08.05.2026

Parabhaava Varudam

Chithirai -

Thiruvalluvar Aandu 2057

READ: Chairman's approval dated 15.04.2026

PROCEEDINGS:

1. The Tamil Nadu Transmission Corporation Limited hereby approves the administrative approval for replacement of failed 1No.16 MVA, 110/33 kV Power Transformer-I(Sl.No.38565)at Manapparai 110/33-11 kV SS in Trichy Operation Circle (Trichy Metro EDC) of Trichy Region and ratification for having replaced the failed power transformer by a healthy one(Sl.No.:124610)at an estimated cost of Rs.65.048 lakhs Gross and Rs.0.720 lakhs Nett. The detailed estimate and report are annexed to these proceedings.
2. The expenditure is chargeable to "TANTRANSCO" – Funds - Capital Expenditure - Trichy Operation Circle (Trichy Metro 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/Trichy Region

(Per) CH TANTRANSCO Proceedings No.49 , 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/ Trichy

The Superintending Engineer/ Trichy EDC

The Superintending Engineer/GCC/ Trichy

The Superintending Engineer/Transmission -I/Chennai -2

The Superintending Engineer/Transmission -II/Chennai -2

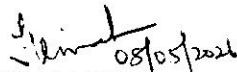
The Superintending Engineer/System Studies/Chennai -2

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

B.P.Section (Administrative Branch)

Stock file

// Forwarded by order//

 08/05/2026

EXECUTIVE ENGINEER/MP II

Enclosure to (Per) CH TANTRANSCO Proceedings No.49, dated :08.05.2026

REPORT TO ACCOMPANY THE ESTIMATE

This proposal envisages replacement of failed 1No.16 MVA, 110/33 kV Power Transformer at Manapparai 110/33-11 kV SS in Trichy Operation Circle (Trichy Metro EDC) of Trichy Region and ratification for having replaced the failed power transformer at an estimated cost of Rs.65.048 lakhs Gross and Rs.0.720 lakhs Nett.

Need:

At present, Manapparai 110/33-11 kV SS is having 2x16 MVA, 110/33 kV Power Transformers, 1x16 MVA + 1x10 MVA, 110/11 kV Power Transformer. The 16 MVA, 110/33 kV HHE make power Transformer I bearing serial No. 38565 was in service at Manapparai 110/33-11 kV SS from 05.02.1993.

The year of manufacture of the above power transformer I is 1990 and has served for about 32 years.

On 25.07.2025 at 13.02 hrs, the LV-I , LV II and GC Breaker of 16 MVA, 110/33 kV power transformer I got fault tripped due to activation of Master relay, Differential relay and Buchholz relay and the power transformer I was isolated from service.

MRT test was conducted on 25.07.2025 and the test results were not found satisfactory. Oil sample was sent to R&D lab Trichy for DGA test on 25.07.2025. DGA test results showed abnormal increase in level of fault gases compared to previous test results, which could have been due to development of suspected high energy thermal/arcing fault inside the power transformer

During internal examination on 30.07.2025, it was found that the HV & LV coils are separated by partition board, remaining coils could not be visualized fully and in OLTC inspection, R phase coil only visible and other coils could not be visualized. OLTC end all tapping leads were found intact. Due to minimum access further defect and the healthiness of the coil and core could not be ascertained at site and power transformer is declared as failed. Hence, the rectification work could not be taken up at site.

In order to avoid overloading in the back fed substations , the failed unit was replaced by 1 No. 16 MVA (SH), 110/33-11 kV ratio power transformer of Andrew Yule make bearing SI.No. 12461 at Manapparai 110/33-11 kV SS.

The failed 16 MVA, 110/33 kV HHE power Transformer I bearing serial No. 38565 was lifted on 16.10.2025 by M/s. Abirami Engineering Pvt. Ltd. Chennai for carrying out rectification work at their site.

Hence, this proposal has been evolved to regularize the replacement made already.

Details of works:

- Erection of 1 No. healthy 16 MVA, 110/33-11 kV power transformer at Manapparai 110/33-11 kV SS.
- Dismantling of failed 1 No. 16 MVA, 110/33 kV power transformer at Manapparai 110/33-11 kV SS.

J. Srinivas
08/05/2026
EXECUTIVE ENGINEER/MASTER PLAN II

Estimate for replacement of failed 16 MVA, 110/33 kV HHE make Power Transformer by a healthy one and ratification for having replaced the same at Manapparai 110/33-11 kV SS in Trichy Operation Circle (Trichy Metro EDC) of Trichy Region

Part - I: Cost of new asset

Rs in lakhs

SL.No.	DESCRIPTION	QTY	RATE	PER	AMOUNT
1	16 MVA, 110/33 kV Power transformer (PO.TR 29/95, dt. 09.03.95)	1 No.	54.543	E	54.543
2	Cost of materials				54.543
3	Labour charges *	actuals			1.785
4	Sub total				56.328
5	Estt & supervision charges @ 15 % (Power Transformer only)				8.181
6	Dismantling charges	actuals			0.539
7	Gross				65.048
8	Less credit				64.328
9	Nett				0.720

*Transport charges borne by the contractor

Part I(A):Dismantling charges

0.539 Lakhs

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.3x CI.5/ CI.4)
1	16 MVA, 110/33 kV Power Transformer	64.328	25	32	57.895
		64.328			57.895

Part III: Devolution of old equipment to stores

Part IV - Part II =

64.328

- 57.895

6.433 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, 110/33 kV power Transformer (Cost data - 1992-93)	1	50.852	5.09	8.39	64.328
	Total					64.328

ABSTRACT

RS IN LAKHS

Part - I:Cost of new asset

GROSS 65.048

NETT 0.720

Part I(A):Dismantling charges

0.539

Part II:Accumulated Depreciation

57.895

Part III: Devolution of old equipment to stores

6.433

Part IV: Removal of old asset

64.328

Hein
EXECUTIVE ENGINEER/MASTER PLAN II