

**TAMIL NADU TRANSMISSION CORPORATION LIMITED**

**ABSTRACT**

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TANTRANSCO – Replacement of existing failed 1 No.16 MVA, 110/11 kV Power Transformer by a healthy one and ratification for having replaced the same at Adhanakottai 110/33-22-11 kV SS in Trichy Operation circle of Trichy Region (Pudukottai EDC) – Administrative approval - Accorded  
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**TECHNICAL BRANCH**

(Per) CH TANTRANSCO Proceedings No. 229

Dated: 22.12.2025

Visuvaivasu Varudam

Margazhi - 07

Thiruvalluvar Aandu 2056

**READ:** Chairman's approval dated 18.12.2025

**PROCEEDINGS:**

1. The Tamil Nadu Transmission Corporation Limited hereby approves the Administrative approval for replacement of existing failed 1 No.16 MVA, 110/11 kV VEI make power transformer by a healthy one at Adhanakottai 110/33-22-11 kV SS in Pudukottai EDC of Trichy Region and ratification for having replaced the failed power transformer at an estimated cost of Rs.114.344 lakhs Gross and Rs. (-)64.418 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 (Pudukottai 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. 229, dated :22.12.2025

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 Projects/Trichy  
The Chief Engineer/System Operation/Trichy  
The Superintending Engineer/Operation/Trichy  
The Superintending Engineer/ Pudukottai 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*  
22/12/2025

EXECUTIVE ENGINEER/MASTER PLAN II

**REPORT TO ACCOMPANY THE ESTIMATE**

This proposal envisages the Administrative approval for replacement of existing failed 1 No.16 MVA, 110/11 kV VEI make power transformer by a healthy one at Adhanakottai 110/33-22-11 kV SS in Pudukottai EDC of Trichy Region and ratification for having replaced the failed power transformer at an estimated cost of Rs.114.344 lakhs Gross and Rs. (-)64.418 lakhs Nett.

**Need:**

At present, Adhanakottai 110/33-22-11 kV SS is in service with 1x16 MVA, 110/33 kV power transformer, 2x10 MVA, 110/22 kV power transformers and 1x16 MVA, 110/11 kV power transformer. The 16 MVA, 110/11 kV VEI make power transformer bearing serial No.VEI/16M/18 was in service at Adhanakottai 110/33-22-11 kV SS from 19.08.2008.

On 06.07.2024 at 15:50 hrs, the 11 kV Valavampatti feeder conductor snapped due to feeder fault and fallen on the near by 22 kV Solar bus and simultaneously 11 kV Valavampatti breaker CT's and breaker limbs and 11 kV LV breaker CT's and limbs also burst out. 11 kV power transformer LV strung bus jumpers snapped and fell down on the cooling fans of power transformer and cooling fans got punctured. Oil spurt out through the punctured holes and got fired with heavy flames. (P13)

During 11 kV Valavambatty feeder conductor snapping fault current had travelled through the AC cable of solar breaker and the AC panel of Substation and damaged AC panel. 2 Nos. of battery chargers connected with AC panel were also completely damaged. Due to charger failure main DC fuse got blown out and hence entire protection was failed. Due to this reason the fault extended upto 11 kV LV & 110/11 kV power transformer and got fired.

On 07.07.2024, the MRT and Special Maintenance tests were carried out and all the test results were found to be satisfactory.

On 07.07.2024 the power transformer was inspected by Executive Engineer/PE/Trichy and found that the marshalling box, fans and cables from marshalling box to RTCC panel, along with internal wiring of the transformer were completely burnt. A heavy fault in the feeder had completely damaged the LV breaker and feeder breaker and also some internal damages in the power transformer which could not be ascertained at site and hence declared as failure.

The DGA test results showed that BDV was low and water content value is high. All other oil test results were found satisfactory.

The year of manufacture of the above failed power transformer is 2007 and has served more than 17 years.

The company has been addressed in this regard to lift the power transformer which is kept idle at Adhanakottai 110/33-22-11 kV SS.

In order to normalize the supply, the defective unit was replaced by another healthy VEI make power transformer bearing Sl.No. VEI/16M/71 of same capacity on 23.07.2024 at Adhanakottai 110/33-22-11 . 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 the existing Adhanakottai 110/33-22-11 kV SS.
- Dismantling of failed 1 No. 16 MVA, 110/11 kV power transformer at the existing Adhanakottai 110/33-22-11 kV SS.

*J. Vinod*  
*22/07/2025*  
**EXECUTIVE ENGINEER/MASTER PLAN II**

**ESTIMATE FOR REPLACEMENT OF FAILED 16 MVA , 110/11 kV VEI MAKE (SL.No. VEI/16M/18)  
POWER TRANSFORMER WITH A HEALTHY VEI MAKE (SL.No. VEI/16M/71) POWER TRANSFORMER  
AT ADHANAKOTTAI 110/33-22-11 kV SS  
IN TRICHY OPERATION CIRCLE**

**Part - I: Cost of new asset**

Rs in lakhs

| SL.N<br>O | DESCRIPTION   | QTY   | RATE    | PER | AMOUNT         |
|-----------|---|-------|---------|-----|----------------|
| 1         | 16 MVA, 110/33 kV power transformer (as per P.O.Tr.No.2161/dt.25.02.2011) | 1 No. | 92.907  | E   | 92.907         |
| 2         | Cost of additional materials  |       |         |     | 4.218          |
| 3         | Total Cost of materials   |       |         |     | 97.125         |
| 4         | Labour charges *  |       | actuals |     | 2.052          |
| 5         | Sub total   |       |         |     | 99.177         |
| 6         | Estt & Supervision charges @ 15 %   |       |         |     | 14.569         |
| 7         | Dismantling charges   |       | actuals |     | 0.599          |
| 8         | <b>Gross</b>  |       |         |     | <b>114.344</b> |
| 9         | Less credit   |       |         |     | 178.762        |
| 10        | <b>Nett</b>   |       |         |     | <b>-64.418</b> |

\* Transport charges - Borne by the repair contractor.

**Part I(A):Dismantling charges**

**0.599** Lakhs

**Part II:Accumulated Depreciation**

| SL. No. | Name of the item                    | Original cost  | Total life in years | Life served in years | Accum. depre. (Cl.3x Cl.5/ Cl.4) | 0.9 |
|---------|-------------------------------------|----------------|---------------------|----------------------|----------------------------------|-----|
| 1       | 16 MVA, 110/33 kV power transformer | 178.762        | 25                  | 16                   | 102.967                          |     |
|         |                                     | <b>178.762</b> |                     |                      | <b>102.967</b>                   |     |

**Part III: Devolution of old equipment to stores**

Part IV - Part II = **75.80 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 (as per P.O.Tr.No.1765,dt.12.11.2007) | 1   | 141.314       | 14.131                        | 23.317                | 178.762                |
|        | <b>Total</b>  |     |               |                               |                       | <b>178.762</b>         |

**ABSTRACT**

**RS IN LAKHS**

**Part - I:Cost of new asset**

**GROSS 114.344**

**NETT -64.418**

**Part I(A):Dismantling charges**

**0.599**

**Part II:Accumulated Depreciation**

**102.967**

**Part III: Devolution of old equipment to stores**

**75.795**

**Part IV: Removal of old asset**

**178.762**

*[Signature]*  
22/12/2025  
Executive Engineer/Master Plan II