

TAMIL NADU POWER DISTRIBUTION CORPORATION LTD.

ABSTRACT

Electricity - Madurai Region - Ramnad EDC - Replacement of failed 5 MVA power transformer with a healthy 5 MVA power transformer at Sayalkudi 33/11 kV SS - Administrative approval - Accorded.

TECHNICAL BRANCH

(Per). MD.TNPDCL Proceedings No.31

Dated: 12.05.2026.
Sri Parapava Varudum,
Chithirai: 29,
Thiruvalluvar Aandu 2057.

READ: Chairman Cum Managing Director's approval dated 18.03.2026.

PROCEEDINGS:

1. The Tamil Nadu Power Distribution Corporation Limited hereby approves the proposal for replacement of the failed 5 MVA power transformer with a healthy unit of same capacity at Sayalkudi 33/11 kV SS in Ramnad EDC of Madurai Region at an estimated cost of Rs.12.32 lakhs Gross and Rs.2.02 lakhs Nett. and ratifies the action of the Chief Engineer/Distr./Madurai Region for having replaced the failed 5 MVA power transformer with a healthy 5 MVA power transformer in anticipation of the approval. The detailed estimate and report are annexed to these proceedings.
2. The expenditure is chargeable to TNPDCL - Funds - Capital Expenditure – Ramnad EDC – 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 TNPDCL 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.

// BY ORDER OF THE CMD//

J.PUSHPALATHA
CHIEF ENGINEER/ PLANNING & RC

Encl: Report and detailed estimate.
To

The Chief Engineer/Distr./Madurai Region.

(Per). MD.TNPDCL Proceedings No.31, dated: 12.05.2026.

Copy to:

The Director/Distribution/TNPDCL/Chennai-2

The Director/Finance/TNPDCL/Chennai-2

The Chief Engineer/MM/Chennai -2

The Superintending Engineer/Ramnad EDC.

The Superintending Engineer/RE&I(D)/Chennai-2

The Company Secretary/TNPDCL/Chennai-2.

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

B.P.Section (Administrative Branch)

Stock file

//FORWARDED BY ORDER//


EXECUTIVE ENGINEER/MASTER PLAN II

Enclosure to (Per). MD.TNPDCL Proceedings No.31, dated: 12.05.2026.

REPORT TO ACCOMPANY THE ESTIMATE

This proposal envisages replacement of the failed 5 MVA power transformer with a healthy unit of same capacity at Sayalkudi 33/11 kV SS in Ramnad EDC of Madurai Region at an estimated cost of Rs.12.32 lakhs Gross and Rs.2.02 lakhs Nett. and ratification for the action of the Chief Engineer/Distn./Madurai Region for having replaced the failed 5 MVA power transformer with a healthy 5 MVA power transformer in anticipation of the approval.

NEED:

Sayalkudi 33/11 kV SS is in service with 2x5 MVA power Transformers. The existing 5 MVA power transformer of Andrew Yule make bearing serial No.11314 was commissioned at Sayalkudi 33 kV SS on 27.06.2015.

On 03.08.2025 at 18.05 hrs., 33 kV GC breaker got tripped due to actuation of Buchholz relay of the above power transformer and oil spurt out through explosion vent of the above power transformer. Hence, the above power transformer was isolated from service. The year of manufacture of the above power transformer is 1987 and has served 38 years as against its full life period of 25 years.

Back feeding arrangements were partially made from the nearby Kadaladi 110/33/11 kV SS & Pernali 33/11 kV SS and balance loads were managed with the available other 5 MVA power transformer at Sayalkudi 33 kV SS.

The MRT tests were conducted on the above power transformer and there was not much difference in the test results when compared to the previous test results. The DGA test results revealed that there was significant presence of fault gases when compared to the previous test results conducted on 03.04.2019. Development of high energy discharge/arcing fault inside the power transformer was suspected and internal examination of power transformer was suggested.

During internal examination, copper granules and insulation paper pieces were found on top of the transformer core. The 'Y' phase HV winding was found punctured. As the above defect could not be attended at site, the power transformer was declared as failed.

In order to normalize supply, the failed unit was replaced by another healthy 5 MVA power transformer of T & S make bearing Sl.No.1681 which got released from Kariyapatty 33 kV SS on 10.09.2025. Hence, this estimate has been evolved to regularize the replacement made already.


EXECUTIVE ENGINEER/MASTER PLAN II

ESTIMATE FOR REPLACEMENT OF THE FAILED 5 MVA POWER TRANSFORMER WITH A HEALTHY UNIT OF SAME CAPACITY AT SAYALKUDI 33/11 KV SS IN RAMNAD EDC

Part - I: Cost of new asset

Rs in lakhs

SL. NO	DESCRIPTION	QTY	RATE	PER	AMOUNT
1	5 MVA, 33/11 kV Power Transformer *	1 No.	8.14	E	8.143
2	Cost of materials				8.143
3	Labour and Transport				2.430
4	Sub total	actuals			10.573
5	Estt & supervision charges @ 15 %				1.586
6	Dismantling charges	actuals			0.161
7	Gross				12.32
8	Less credit				10.30
9	Nett				2.02

* - Year of manufacture: 1981, as P.O. rate is not known, 50% of rate as per cost data 2006-07 has been adopted

Part I(A):Dismantling charges

0.161 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	5 MVA, 33/11 kV Power Transformer	10.301	25	38	9.27
		10.30			9.27

Part III: Devolution of old equipment to stores

Part IV - Part II

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1.03 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	5 MVA, 33/11 kV Power Transformer	1	8.14	0.81	1.34	10.301
	Total					10.30

* - Year of manufacture: 1987, as P.O. rate is not known, 50% of rate as per cost data 2006-07 has been adopted

ABSTRACT

RS IN LAKHS

Part - I:Cost of new asset chargeable

GROSS 12.32

Part I(A):Dismantling charges

NETT 2.02

Part II:Accumulated Depreciation

0.161

Part III: Devolution of old equipment to stores

9.27

Part IV: Removal of old asset

1.03

10.30

[Signature]
Executive Engineer/Master Plan II