

TAMIL NADU TRANSMISSION CORPORATION LTD

ABSTRACT

TANTRANSCO – Provision of additional source to Semmankuppam 110 kV SS from the existing 110 kV Cuddalore – SPIC feeder in Villupuram Operation Circle of System Operation/Chennai – Balance work of (i) Erection of 110 kV SC line on DC tower with Panther conductor for a distance of 2.21 kms. from the tapping location of the existing 110 kV Cuddalore – SPIC feeder upto the existing Semmankuppam 110 kV SS and (ii) Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore – ABAN feeder at Semmankuppam 110 kV SS – Revised administrative approval – Accorded

TECHNICAL BRANCH

(Per) CH TANTRANSCO Proceedings No:45

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

READ: Chairman's approval dated 29.04.2026.

PROCEEDINGS:

1. The Tamil Nadu Transmission Corporation Limited hereby approves the proposal for revised administrative approval for the balance work of (i) Erection of 110 kV SC line on DC tower with Panther conductor for a distance of 2.21 kms. from the tapping location of the existing 110 kV Cuddalore – SPIC feeder upto the existing Semmankuppam 110 kV SS and (ii) Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore – ABAN feeder at Semmankuppam 110 kV SS at an estimated cost of Rs.336.85 lakhs Gross and Rs.335.70 lakhs Nett. by partially superseding the approval already accorded vide (Per) CH.TANTRANSCO Proceedings No.107, dt.02.05.2017 for Provision of additional source to Semmankuppam 110 kV SS from the existing 110 kV Cuddalore – SPIC feeder in Villupuram Operation Circle of System Operation/Chennai. The detailed estimate and report are annexed to these proceedings.
2. The expenditure is chargeable to TANTRANSCO - Funds - Capital expenditure – Villupuram Operation Circle - 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.
4. The works will be taken up after ensuring the budget provision.

// BY ORDER OF THE CHAIRMAN //

J.PREMALATHA

CHIEF ENGINEER / TRANSMISSION

Encl: Report and detailed estimate.

To

The Chief Engineer/ System Operation/Chennai

Copy to:

The Managing Director/TANTRANSCO/Chennai-2.

The Director/Transmission Projects/TANTRANSCO/Chennai-2.

The Director/Operation/TANTRANSCO/Chennai-2.

The Director/Distribution/TNPDCL/Chennai-2.

The Director/Finance/ TANTRANSCO /Chennai-2.

The Chief Engineer/Transmission/ Chennai-2.

The Chief Engineer/ Civil Transmission /Chennai -2.

The Superintending Engineer /Planning/Transmission/ Chennai - 2

The Superintending Engineer /System Studies /Transmission/ Chennai - 2

The Superintending Engineer / Operation / Villupuram

The Superintending Engineer /GCC /Trichy.

The Executive Engineer /TLC/Neyveli

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

B .P. Section (Administrative Branch)

Stock file

//FORWARDED BY ORDER//

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EXECUTIVE ENGINEER/MASTER PLAN II

REPORT TO ACCOMPANY THE ESTIMATE

This proposal envisages revised administrative approval for the balance work of (i) Erection of 110 kV SC line on DC tower with Panther conductor for a distance of 2.21 kms. from the tapping location of the existing 110 kV Cuddalore – SPIC feeder upto the existing Semmankuppam 110 kV SS and (ii) Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore – ABAN feeder at Semmankuppam 110 kV SS at an estimated cost of Rs.336.85 lakhs Gross and Rs.335.70 lakhs Nett. by partially superseding the approval already accorded vide (Per) CH.TANTRANSCO Proceedings No.107, dt.02.05.2017 for Provision of additional source to Semmankuppam 110 kV SS from the existing 110 kV Cuddalore – SPIC feeder in Villupuram Operation Circle of System Operation/Chennai.

Need :

Administrative approval for Provision of additional source to Semmankuppam 110 kV SS from the existing 110 kV Cuddalore – SPIC feeder in Villupuram Operation Circle of System Operation/Chennai has already been accorded vide (Per) CH. TANTRANSCO Proceedings No. 107, dt.02.05.2017.

At present, Semmankuppam 110 kV SS is being fed off 110 kV Cuddalore – ABAN feeder with Panther conductor by LILO arrangement. The existing 110 kV Cuddalore – SPIC feeder which was exclusively feeding M/s. SPIC Pharma EHT has been disconnected on 21.11.2011 and the above feeder is idle at present.

Hence, in order to give load relief to the existing 110 kV Cuddalore – ABAN feeder and to beneficially utilize the existing 110 kV Cuddalore – SPIC feeder, it has been proposed to provide a 110 kV link from the existing 110 kV Cuddalore – SPIC feeder to Semmankuppam 110 kV SS. Hence, this proposal for provision of additional source to Semmankuppam 110 kV SS from the existing 110 kV Cuddalore – SPIC feeder has been evolved.

Purpose of proposal:

A. Erection of 110 kV SC line on DC towers for a distance of 2.21 kms. from the tapping location of the existing 110 kV Cuddalore – SPIC feeder upto the existing Semmankuppam 110 kV SS.

B. Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore – ABAN feeder at Semmankuppam 110 kV SS.

(Received from SE/O/Villupuram dated : 30.03.2026)

| | |
|--------------------------------------|---|
| Reduce overloading/ voltage issue | <u>Details of existing SS</u> |
| | 1) 110 KV Semmankuppam SS - 110/22 - 3X16 - 48 MVA |
| | 2) 110 KV Mettupalayam SS 110/22 - 1x10 - 10 MVA |
| | 3) 110 KV B.Mutlur SS - 110/33-2X16, 110/11 -2X 10 - 52 MVA |
| | 4) 110 KV Chidambaram - 110/33-1X25, 110/11 -2X 16 - 57 MVA |
| | 5) 110 KV Chemplast EHT Service - 12 MVA |
| | 6) 110 KV Chemplast Sanmar EHT Service - 6 MVA |

Proposed Network element

| Proposed Network element | Relief to the Existing congested elements (Substations/Lines) in MVA | Loading of Proposed new element after relief in MVA |
|--|--|--|
| <p>A. Erection of 110 kV SC line on DC towers for a distance of 2.1 kms. from the tapping location of the existing 110 kV Cuddalore – SPIC feeder upto the existing Semmankuppam 110 kV SS.</p> <p>B. Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore – ABAN feeder at Semmankuppam 110 kV SS.</p> | <p><u>Extg.110KV Cuddalore- Kadalangudi Feeder</u></p> <p>Total Connected Load :185 MVA</p> <p>Relief : 66 MVA</p> <p>(Semmankuppam SS : 48 MVA Chemplast : 12MVA Chemplast Sanmar : 6MVA)</p> | <p><u>Subject proposal:</u></p> <p>110 kV Cuddalore – SPIC – Semmankuppam Feeder</p> <p>Loading - 66 MVA</p> |

The Administrative approval involves the following works and it's present status are detailed as below:

| Sl. No | Description | Cost in Lakhs as per BP No 107 dt.02.05.2017 | Present status |
|--------|---|--|---|
| 1 | Erection of 110 kV SC line on DC towers for a distance of 3.5 kms. from the tapping location of the existing 110 kV Cuddalore – SPIC feeder upto the existing Semmankuppam 110 kV SS. | Rs.256.58 lakhs Gross and Nett. | Work awarded vide K2 agreement No.33&34, dt 29.10.2021 and partially completed for Rs.27.07 Lakhs. and material cost of Rs.45.155. Due to severe ROW issues the same was short closed on 19.03.2025.The status of work is as follows: i) Foundation 8/10 Nos completed ii) Tower erection 8/10 Nos completed iii) Conductor stringing not taken up |
| 2. | Provision of 110 kV Bay extension at Semmankuppam 110 kV SS. | | Work completed and bay commissioned on 13.10.2022. Expenditure incurred – 19.32 Lakhs |
| 3. | Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore – ABAN feeder at Semmankuppam 110 kV SS. | | Work awarded vide K2 agreement No.19, dt 29.05.2019 and partially completed for Rs.7.98 Lakhs. The same was short closed on 18.02.2023. |

The Chief Engineer/System Operation/Chennai has furnished a proposal seeking revised administrative approval stating the following reasons:

i) The work was awarded on 29.05.2019 with the contract period of three months. The contractor couldn't commence the work immediately due to non availability of stub, tower and stringing materials.

ii) While commencing the work, severe ROW issues were raised by the land owners. Enter upon permission has been requested to the District Collector/ Cuddalore vide letter dated.08.07.2021. The Chairman /TANTRANSCO has also addressed to the District Collector/Cuddalore in D.O.Lr.CH.TANTRANSCO/CE/C/TR/SE/CII/EECI/A3/ F. DOC/D.37/21, Dt.26.07.21 for obtaining enter upon permission.

iii) The District Collector has issued enter up on order on 16.10.2021 and subsequently 8 Nos foundation and 8 Nos tower erection were completed out of 10 Nos locations. Balance work could not be completed due to severe objection by the land owners demanding for higher compensation.

iv) The District Collector/Cuddalore was again addressed and a peace committee meeting was conducted by RDO/ Cuddalore along with land owners and TNEB /TANTRANSCO official on 26.08.2022 but the issue was not resolved. Further, a survey has been conducted for identification of alternate route but not found suitable as the line has to be routed through back water stream with mangrove forest. After final discussion of TANTRANSCO & TANGEDCO officials with land it was decided to execute the work in the approved route itself.

v) Revised profile was approved on 22.04.2024, as NHAI has constructed over bridge in between Loc 1 and 2 but due to severe objections raised by land owners the balance work could not be commenced.

vi) Due to lapse of more than 5 years, proposal for revised administrative approval has been submitted.

vii) On receipt of the revised administrative approval, the work will be taken up after getting fresh enter upon permission from the District Collector and with Police protection.

The details of original sanction, its cost and details of revised estimate and cost of the subject proposal are given below:

| Sl. No | Description | Cost in Lakhs | Remarks |
|--------|---|---|--|
| 1 | Provision of additional source to Semmankuppam 110 kV SS from the existing 110 kV Cuddalore – SPIC feeder in Villupuram Operation Circle of System Operation/Chennai | Rs.256.58 lakhs Gross and Nett. | Approved vide (Per) CH. TANTRANSCO Proceedings No.107, dt.02.05.2017 |
| 2. | Balance work to be taken up: A. Erection of 110 kV SC line on DC towers for a distance of 2.1 kms. from the tapping location of the existing 110 kV Cuddalore – SPIC feeder upto the existing Semmankuppam 110 kV SS. B. Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore – ABAN feeder at Semmankuppam 110 kV SS. | Rs.336.85 lakhs Gross and Rs.335.70 lakhs Nett. | The subject proposal seeking Revised administrative approval submitted for approval. |
| 3. | Difference in cost | | Difference in cost could not be arrived since partial work of the original BP have been completed and the subject proposal is partially superseding the administrative sanction already accorded |

Details of work involved:

- Erection of 110 kV SC line on DC towers for a distance of 2.21 kms. from the tapping location of the existing 110 kV Cuddalore – SPIC feeder upto the existing Semmankuppam 110 kV SS.
- Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore – ABAN feeder at Semmankuppam 110 kV SS.
- Dismantling of conductor, insulator and tower scrap.

J. Lenin
08/07/2026
EXECUTIVE ENGINEER/MASTER PLAN II

Detailed estimate for provision of additional source to Semmankuppam 110 kV SS from the existing 110 kV Cuddalore - SPIC feeder in Villupuram Operation circle of Chennai
Operation Circle

PART I: Chargeable to new asset 1020400

Rs in Lakhs

| Sl. No | Description | Quantity | Rate | Per | Total Amount |
|--------|--|----------|------|-----|----------------|
| 1 | Erection of 110 kV SC line on DC towers (As per Annexure I) | 2.21 kms | | | 329.266 |
| 2 | Provision of 110 kV bus arrangement to bye-pass the existing 110 kV Cuddalore - ABAN feeder at Semmankuppam 110 kV SS (As per Annexure II) | | | | 6.805 |
| 3 | Dismantling charges | | | | 0.783 |
| 4 | Total (Gross Amount) | | | | 336.854 |
| 5 | Credit value | | | | 1.156 |
| 6 | Nett Total | | | | 335.698 |

Part I A: Dismantling Charges Chargeable to A/c code No. 4021137 = 0.783 lakhs

Part II : Accumulated Depreciation Chargeable to (STOCK) A/c code No. 1011300

| Sl. No | Description | Qty | Original cost of asset in lakhs | Full life period | useful life period | Acc.Dep = 0.9*(col.4* col.6/col.5) |
|--------|-----------------------|-----|---------------------------------|------------------|--------------------|------------------------------------|
| 1 | Part IV (Sl.No.1 & 2) | | 1.156 | 35 | 35 | 1.041 |
| 2 | Total | | | | | 1.041 |

Part III Devolution of old equipment to store

Part III = Part IV - Part II **0.12 lakhs**

PART IV REMOVAL OF OLD ASSET CHARGABLE TO A/c No. 1010300

| Sl. No | Description | Qty | Original cost in lakhs * | Original erection charges | Original centages | Original cost of asset in lakhs |
|--------|---------------------------------|----------|--------------------------|---------------------------|-------------------|---------------------------------|
| 1 | ACSR Panther conductor Scrap | 438.3 kg | 0.39 | 0.039 | 0.065 | 0.499 |
| 2 | GI Scrap from 120 KN Insulators | 0.006 MT | 0.00 | 0.000 | 0.000 | 0.002 |
| 3 | GI/MS Tower Angle Scrap | 2.59 MT | 0.52 | 0.052 | 0.085 | 0.655 |
| 4 | Total | | | | | 1.156 |

* As per report received from GCC/Trichy

Rs. In Lakhs

| Abstract | | Gross | Nett |
|--|--|---------------|---------------|
| Part I: New Asset | | 336.85 | 335.70 |
| Part I (a):Dismantling charges | | | 0.783 lakhs |
| Part II: Accumulated Depreciation | | | 1.04 |
| Part III :Devolution of old equipment to store | | | 0.12 |
| Part IV :Removal of old assets | | | 1.16 |

[Signature]
EXECUTIVE ENGINEER/MASTER PLAN II

ANNEXURE I

Earthwork excavation, stub setting, concreting, supply & transport and erection of towers for Loc 1&2, stringing of panther conductor & earthwire for the span of 2.21 km for erection of 110 kV SC line on DC tower for the existing Cuddalore - SPIC 110 kV feeder to the existing Semmankuppam 110 kV SS

| ABSTRACT | | |
|-----------------|---|--------------------|
| Sl. No | Description Of Work | Amount |
| 1 | Line erection work (Schedule A) | 4945762.35 |
| 2 | Supply of materials (Schedule B) | 5458658.32 |
| 3 | Sub total | 10404420.670 |
| 4 | Contingencies @1% | 104044.207 |
| 5 | Cost of materials and equipments | 10508464.877 |
| 6 | Establishment and Supervision Charges @ 15% | 1576269.732 |
| 7 | Sub total | 12084734.608 |
| 8 | GST @ 18% | 2175252.229 |
| 9 | LWF @ 1% of work portion(40%) | 19783.049 |
| 10 | Total (Gross Amount) | 14279769.887 |
| 11 | Tree/Crop Compensation @2.21 KM | 2210000.000 |
| 12 | Land compensation @2.21 KM | 16436806.733 |
| 13 | Grand Total | 32926576.620 |
| 14 | Grand Total | 32926580.00 |

ANNEXURE II**Provision of 110KV bus arrangement to bay pass the existing 110KV
cuddalore-ABAN feeder to the existing Semmakuppam 110KV SS**

| ABSTRACT | | |
|-----------------|---|---------------------|
| Sl. No | Description Of Work | Amount in Rs |
| 1 | Line erection work (Schedule A) | 280246.00 |
| 2 | Supply of materials (Schedule B) | 215436.76 |
| 3 | Sub total | 495682.76 |
| 4 | Contingencies @1% | 4956.83 |
| 5 | Cost of materials and equipments | 500639.58 |
| 6 | Establishment and Supervision Charges @ 15% | 75095.94 |
| 7 | Sub total | 575735.52 |
| 8 | GST @ 18% | 103632.39 |
| 9 | LWF @ 1% of work portion(40%) | 1120.98 |
| 10 | Total (Gross Amount) | 680488.90 |
| 11 | Total (Gross Amount) | 680490.00 |
| 12 | Credit value | 39567.00 |
| 13 | Nett Total | 640923.00 |
| 14 | Nett Total | 640920.00 |