

TAMILNADU GENERATION AND DISTRIBUTION CORPORATION
(A Subsidiary of T.N.E.B.Ltd.,)

Office of the Executive Engineer/Civil
TANGEDCO/Chennai Development Circle,
Guindy/Chennai-600032.

Whomsoever concerned

JUSTIFICATION OF THE SCHEME

Laying of 33 KV 1 x 630 Sq mm UG Cable from Mambakkam 110KV SS to Pudhupakkam 33KV SS by Tamilnadu Generation and Distribution Corporation is under progress. In this connection, I would state the justification of this scheme to benefit the General public as described below:-

The Tamilnadu Generation and Distribution Corporation Ltd hereby approves the proposal for i) establishment of 33/11 KV SS with 2x8 MVA, 33/11 KV power transformers at Kelambakkam and ii) establishment of 33/11 KV indoor SS with 2x16 MVA, 33/11 KV power transformers at Pudupakkam in Chengalpattu EDC of Chennai South Region at an estimated cost of Rs.979.18 lakhs Gross & Nett. Vide (per) TANGEDCO Proceedings No: 224 Dt 26.05.2014.

1. The Laying of 33 KV 1 x 630 Sq mm UG Cable from Mambakkam 110KV SS to Pudhupakkam 33KV SS is a Govt. of Tamilnadu Scheme and it was floated in e-tender No.TNEB/TANGEDCO-SE-Chennai Development Circle/65/17-18/ET/3775, and the tender was opened on 21.09.2017 under the Electricity Act 2003 and it is informed that by virtue of the provisions contained in sub-section (2) (a) of section 185 of the Electricity Act, 2003, the TANGEDCO being the Licensee and successor entity of Tamilnadu 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.
2. M/s Provident housing Ltd have proposed a township namely " Provident Cosmocity" at Pudupakkam Village with the expected demand of 10MVA. As Per TNERC notification No: TNERC/DC/08-12 dt 24.08.2009, space/land has to be allotted for establishment of SS in case of group housing/Commercial

complex where the total demand exceeds 5MVA. As, the total demand expected from M/s provident housing Ltd exceeds 5MVA, they have agreed to spare the land to an extend of 1600Sq.mts and registered in favour of TANGEDCO for establishment of the proposed 33/11 KV SS at free of cost. Hence, it has been proposed to establish a new 33/11 KV SS to meet the above said load.

3. Further, at present Mambakkam & Pudupakkam village areas are being fed by 11KV Kazhipattur feeder & 11 KV Kelambakkam feeder off Mambakkam 110/11 KV SS. Mambakkam 110/11 KV SS is having 2x16 MVA, 110/11 KV power transformers and the sustained peak reached on the power transformers is 21 MVA. The details of the feeders are furnished below.

Sl.No	Name of the Feeder	Length in Kms	CL in MVA	Peak in MVA	Voltage regn %	Line loss in LU
1	11 KV Kazhipattur	8.29	12.81	5.33	18.18	31.43
2	11 KV Kelambakkam	11	9.48	5.71	18.08	10.72

4. Since, the 11 KV feeders feeding the area are lengthy and connecteds loads are more, voltage regulations have exceeded the permissible limit of 8%. Hence low voltage problem is prevailing in this area and the line loss is also very high. Bifurcation of the existing 11 KV feeders would not improve the voltage regulation, since the connected loads are at the tail end of the feeders. However, as already stated above approval has been accorded for bifurcation of Kelambakkam feeder off Mambakkam 110/11 KV SS.
5. Hence, in order to cater the housing demand, to improve the voltage regulation of the existing feeders feeding the area, to reduce line loss and to accommodate the future load growth, it becomes essential to establish a 33/11 KV SS at Pudupakkam which is the load centre.
6. On establishment of the proposed 33/11 KV SS at pudupakkam, the savings in line loss will be 25.73 LU per annum. The financial savings due to the above is Rs.141.24 lakhs per annum.
7. Connected load to a tune of 17.75 MVA from Mambakkam 110/11 KV SS has been proposed to be transferred to the proposed pudupakkam 33/11 KV SS. Hence around 20 MVA load will be incident on the proposed SS. Hence it is

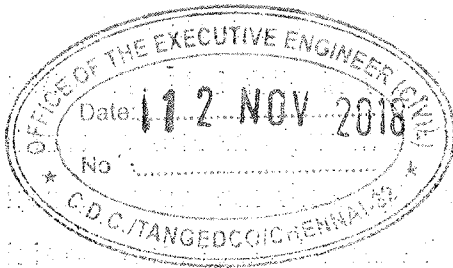
proposed to install 2x16 MVA, 33/11 KV Power transformers at the proposed pudupakkam 33/11 KV SS.

8. At present there is no 110/33 KV SS available nearer to the Kelambakkam area. Hence in order to provide 33 KV Supply to Pudupakkam 33 KV SS, it is proposed to introduce a 110/33 KV ratio at the existing Mambakkam 110/11 KV SS and to erect 33 KV line to the proposed Pudupakkam 33 KV SS.
9. The above said laying work was awarded on 26.10.2017 vide K2 Agreement 89/2017-18 of SE/CDC/TANGEDCO.

The cable line location of Vandalur-Mambakkam-Kelambakkam Road from Km 13/2- Km 11/6 falls in the Sonalur Reserve forest area of mambakkam village of Chengalpattu-kanchipuram Division. From the pudupakkam SS to 13/2 km on vandalur kelambakkam road the supply is already available by overhead transmission line. Further it is proposed to lay the cable from 13/2 to 11/6 km by UG line.

There is no alternate Government/Vacant land to lay the Cable. The Sonalur Reserve Forest is having a large extend of land and it is also not possible to cross the habitations.

Hence, it is proposed to cross the Sonalur reserve forest in a minimum shortest length under unavoidable situations.



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