



# KERALA STATE ELECTRICITY BOARD LIMITED

(Incorporated under the Companies Act, 1956)

Reg. Office: Vidyuthi Bhavanam, Pattom, Thiruvananthapuram - 695 004

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## ABSTRACT

TransGrid 2.0-Phase II- Valluvanad Lines and Substation Package-Administrative Sanction  
accorded – Orders issued.

Corporate Office(SBU-T)

B.O.(FTD )No.1 /2021/D(T&SO)/T6/TransGrid/VLSP/20-21 dated,Thiruvananthapuram, 05 .01.2021

- Read: (1)Letter No.DB60/CE/TransGrid/VLSP/2020-21/796/dated 12.10.2020 of the  
Chief Engineer (TransGrid)  
(2) B.O (DB) No.897/2019/D(T&SO)/T7/TransGrid/GI/19-20 dated 03.12.2019  
(3) Note No: D(T&SO)/T6/TransGrid/VLSP/2020-21/235 dated: 23.12.2020 of the  
Director (Transmission & System Operation) (Agenda No.78/12/20).

## ORDER

The Chief Engineer, TransGrid as per letter read as 1<sup>st</sup> above, submitted the Detailed Project Report with estimate for an amount of Rs 184.33 Cr(Rupees One hundred and Eighty four Crores and thirty three lakhs only) for Valluvanad Lines and Substation package which involves a comprehensive Lines and Substations package . The total package is divided into two phases based on the sequence of construction with minimum supply interruption. In the Phase-I, Project A is planned for the up-gradation of 110 kV Vennakkara substation to 220 kV and Project B for establishing of one important transmission line connectivity from 400 kV substations, Elappully and Madakkathara with 220kV link. In Phase II of the Package, up-gradation of the existing 110kV SC Vennakkara – Mannarkkad feeder via Kalladikode substation is planned as three Subprojects. The Valluvanad lines package involves the following,

### **Phase I – Project A: 220kV GIS Vennakkara (Estimate Amount- Rs.53.61 Cr.)**

Construction of 220/110 kV GIS at Vennakkara, Palakkad with 4 nos 220 kV feeder bays, 1no Bus Coupler bay, 2 nos 220/110 kV 100 MVA Transformer Bays etc. Civil works including Control Room and feeder rearrangement works will be undertaken in the first phase. The project completion period is 18 months.

### **Phase I - Project B: 220/110kV MCMV Line to Vennakkara (Estimate Amount-Rs.28.70Cr.)**

Construction of 7.5 km 220/110 kV MCMV line from the crossing point of 220kV Elapully-Madakathara and 66kV Vennakkara-Nenmara feeders near Kuzhalmannom, to Vennakkara substation along the existing RoW of 66 kV Vennakkara-Nenmara feeder using existing RoW will be executed in this Project, in the same timeline as Project A.

**Phase II – Project A: 220/110kV MCMV Line from Vennakkara to Manarkkad in existing 110kV RoW. (Estimate Amount-Rs.100.60Cr.)**

Construction of 220/110kV MCMV feeder from Vennakkara to Manarkkad will be done in this project. The project will be executed in three phases as noted below, after completion of Phase I of VLSP and Attapady Green Energy Corridor Projects ie, after the upgradation of Vennakkara substation to 220kV and establishing an alternate source in 110 kV level to Mannarkkad substation from proposed 220kV Mannarkkad Substation. The total length of lines under this project is 34 km. The completion period of this project is 18 months.

- **Project AI: 220/110kV MCMV Line in existing 110kV RoW**

Construction of 220/110kV MCMV feeder along 110kV SC Vennakkara-Malampuzha feeder (part of Vennakkara-Mannarkkad feeder) from Vennakkara Substation to LILO point of Malampuzha Substation at Puthuppariyaram will be done in this project. The total length of lines under this project is 5.5 km. The completion period of this project is 6 months.

- **Project A II: 220/110kV MCMV Line in existing 110kV RoW**

Construction of 220/110kV MCMV feeder along 110kV SC Malampuzha-Kalladikode feeder (part of vennakkara-Mannarkkad feeder) from LILO point at Puthuppariyaram to LILO point at Kalladikkode Substation for a length of 14.5 km will be done in this project. The completion period of this project is 6 months and will be done in the phase I.

- **Project A III: 220/110kV MCMV Line in existing 110kV RoW**

Construction of 220/110kV MCMV feeder along 110kV SC Kalladikode –Mannarkkad feeder (part of vennakkara-Mannarkkad feeder) from LILO point at Kalladikkode to Mannarkkad Substation for a length of 14km will be done in this project. The completion period of this project is 6 months after the completion of Phase I project.

**Phase II-Project B: Up-rating the existing 110kV LILO portion of the line from Puthuppariyaram LILO point to Malampuzha using AL59 conductor.(Estimate Amount Rs.1.42 Cr.)**

The existing configuration of 110kV LILO line from Puthuppariyaram LILO point to Malampuzha is 110kV DC on 'D' type towers with ACSR Wolf conductor. As the main line is upgraded to 220/110kV configuration with ACSR Twin Panther/Single Panther configuration, the LILO has to be enhanced to the capacity of Panther conductor. Hence it is proposed to up rate the LILO line without changing the existing towers by using High Performance AL59 conductor, having ampacity equivalent to Panther conductor and mechanical parameters similar to ACSR Wolf conductor. The total length of lines under this project is 6.0 km.

With the implementation of VLSP project, the quality and availability of power from Vennakkara substation will get improved. The scheme is also expected to be beneficial to the system by way of evacuating the power received at the PGCIL owned Elappully substation node directly to the load centres and further interconnecting the same to 400kV KSEBL Madakkathara substation at 220kV level.

220 kV GIS substation, Vennakkara is proposed in the premises of existing substation and no additional land acquisition is required. The project is included in TransGrid 2.0 Project and is to be funded from KIIFB. Based on the Load Flow Study report, the project has a loss reduction of 1.8 MW, which contributes an energy savings of about 87.19 lakh units per annum. Project IRR calculated is 6.71 %.

The DPR has been approved by the DPR committee in the meeting held on 22.09.2020. The total estimated cost of VLSP Project comes to **Rs. 184.33 Cr.** (Rupees One hundred and eighty four Crores and thirty three lakhs only), out of which **Rs.53.61 crores** is for substation part and **Rs.130.72 Crores** is for lines portion.

As per CI 2.01 of the Delegation of powers, FTD is empowered to accord sanction for original works of capital nature up to Rs.50 Cr. However, as per B.O read as 2<sup>nd</sup> above, the Director Board had accorded sanction for the approval of Phase II works of TransGrid 2.0 package amounting to Rs. 2172 Cr. and also authorized the Full Time Directors to accord Administrative Sanction for the estimates of individual works in Phase II.

The Director (T&SO), as per note read as 3<sup>rd</sup> above, elaborated on the technical and financial viability and necessity of the project and placed the proposal before the Full Time Directors meeting.

Having considered the matter in detail, the Full Time Directors in the meeting held on 24.12.2020,

“Resolved to accord Administrative Sanction for an estimate amounting to Rs.184.33 Cr. (Rupees One Hundred and Eighty Four crores and Thirty Three Lakhs only) for the following.

1. Construction of 220/110 kV GIS at Vennakkara, Palakkad for an amount of Rs 53.61Cr.
2. Construction of 7.5 km 220/110 kV MCMV line of Elapully-Madakkathara feeder from Kuzhalmannom to Vennakkara substation for an amount of Rs 28.70 Cr.
3. Construction of 34 km of 220/110kV MCMV feeder from 220 kV Vennakkara Substation to the proposed 220 kV Manarkkad substation for an amount of Rs 100.60 Cr.

4. Up-rating the existing 110kV LILO portion (6 km) of the line from Puthuppariyaram LILO point to Malampuzha using AL59 conductor for an amount of Rs.1.42 Cr.

“Further resolved to submit the DPR of Valluvanad Lines and Substation Package to KIIFB for securing funding as part of TransGrid 2.0 Project, subject to condition that appropriate sanction shall be obtained from KSERC in due course.”

Orders are issued accordingly.

By Order of the Full Time Directors,  
Sd/-  
Lekha G.  
Company Secretary (In- Charge)

To :

The Chief Engineer (TransGrid)

Copy to:

The Deputy CE (TransGrid South/North)/ The Deputy CE (IT)

The Financial Adviser/ The Chief Internal Auditor.


The RAO/ RAO.

The TA to Chairman & MD/ D(T&SO)/ D(D,IT &HRM)/ D(G-C)/ D(G-E&SCM)/D (P&S)

The PA to Director (Finance)/CA to Company Secretary

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Forwarded / By Order

  
Assistant Engineer