

# **KARNATAKA POWER TRANSMISSION CORPORATION LTD**

*Justification/ as well as.*

## **PROJECT REPORT**

**Sub :** CONSTRUCTION OF NEW 110KV LILO LINE ON DC TOWERS FROM 110KV GULEDGUDDA - ILKAL LINE TO PROPOSED 110/11KV NAGARAL S P S/S CORRIDOR FOR A DISTANCE OF 10.235KMS.

### **1.0 Scope of the Project:-**

This DPR is for the work of Construction of establishing 1x10 MVA, 110/11 KV Sub-Station at Nagaral SP in Guledgudda Tq., Bagalkote District by constructing 110 kV LILO line from 110 KV Guledgudda - Ilkal line for a distance of 10.235KMS.

### **2.0 Objectives:-**

- 2.1 To reduce the length of 11 kV lines so as to minimize the losses.
- 2.2 To improve reliability of Power Supply to the surrounding area.
- 2.3 To improve Voltage regulation.

### **3.0 Introduction:-**

- 3.1 This project report envisages for establishing 1x10 MVA, 110/11 kV Sub-Station at Nagaral SP in Guledgudda Tq., Bagalkote Dist., by constructing 110 kV LILO line from 110 kV Guledgudda-Ilkal line for a distance of 10.235 Kms.

### **4.0 Existing Transmission Network:-**

- 4.1 The installed capacity of 110 kV Guledgudda Sub-Station is 1x20MVA, 110/33KV & 2X10MVA, 110/11KV with peak load of 12.6 MW, 7.0 MW, 3.8 MW, 110KV Guledagudda Sub-station is being fed from 220kV Bagalkot sub-station by 110kV SC line with Lynx conductor for a distance of about 21 kms. The peak load recorded on 110kV SC line feeding to 110kV Guledagudda sub-station in 29 MW.
- 4.2 The installed capacity of 33/11kV Gudur Sub-station is 2x5MVA, 33/11KV with PL 6.0 MW and is being fed from 110kV Guledagudda Sub-station.
- 4.3 The installed capacity of 33/11kV Aminagad Sub-station is 2x5MVA, 33/11KV with PL 7.5 MW and is being fed from 110kV Guledagudda Sub-station.



- 4.4 The installed capacity of 33/11kV Nandikeshwara Sub-station is 2x5MVA, 33/11KV with PL 6 MW and is being fed from 110kV Guledagudda Sub-station.
- 4.5 The details of 11kV feeders feeding to Nagara & surrounding villages is as follows.

Sl. No	Name of the 11kV feeders/feeding station	Length of feeder in Kms	Installed capacity of DTCs in KVA	Peak load in Amps	AES in MU's	%VR	AEL in Mu's
<b>110/33/11kV S/S Guledagudda</b>							
1	Nagara IP	22.33	5001	170	2.24860	19.50	0.29676
2	Allur IP	22.2	3221	163	4.06570	16.81	0.53714
<b>33/11kV S/S Gudur</b>							
3	Chikanal	15.7	3706	180	5.23790	29.28	1.36808
<b>33/11kV S/S Aminagad</b>							
4	Aihole	14.85	5250	194	2.38796	18.43	0.29189
<b>33/11kV S/S Nandikeshwar</b>							
5	Pattadakall	15.4	4033	186	3.07320	20.02	0.4929
<b>Total</b>			21211				2.9868

## 5.0 Problems:

- 5.1 Agriculture is the main occupation & sugar cane is the main crop. It is reported that every year number of pump sets are increasing & this increase in load can be met out by establishing a new sub-station at Nagara SP village.
- 5.2 The length of 11kV feeders emanating from these sub-stations varies from 14.8 kms to 22.3 kms.
- 5.3 The VR varies from 16.8% to 29.8%. Very low voltage complaints are more in this area.

## 6.0 Proposals:-

In order to have quality & reliable power supply to the consumers in and around surrounding of Nagara SP village, the proposal of Construction of establishing 1x10 MVA, 110/11 KV Sub-Station at Nagara SP in Guledgudda Tq., Bagalkote District by constructing 110 kV LILO line from 110 KV Guledgudda - Ilkal line for a distance of 10.235KMS.

## **7.0 Benefits:-**


- 7.1 After commissioning of the above project, there will be a quality & reliable power supply to the consumers in and around surrounding of Nagaral SP village, and the length of the 11 kV lines will be reduced and there will be reduction in interruptions.
- 7.2 Alternate power supply can be arranged, both either from 110/11 kV Sub-Station Guledgudda & also from 110/11 kV Sub-Station Ilkal in case of emergency, to 110/11 kV Sub-Station Nagaral SP on the LILO line on DC Towers from 110KV Guledgudda - Ilkal line.
- 7.3 The voltage regulation of the 11 kV feeders will be improved.

## **8.0 Approvals:-**

Approved in 80th TCCM held on 22-02-2019.

## **9.0 Budget Provision:-**

The work is included in the Annual Program of Works for 2021-22 under list-3 with budget provision of Rs. 1 lakhs.

  
Executive Engineer (C)  
Major Work's Division,  
KPTCL, BAGALKOTE.