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KARNATAKA POWER TRANSMISSION CORPORATION LTD.

No .:605/EEE/MWD/UKD/AEE(O)/HBL/21-22/
Enclosure:

Office of the
Executive Engineer (Ele),
Major Works Division (UK District),
KPTCL, Vidhyuth Nagar
Karwar Road, **Hubballi-24**

Registered office of the Company: Corporate Office, Kaveri Bhavan, KPTCL, KG Road, Bengaluru-09.
Corporate Identity Number (CIN) :U40109KA1999SGC025521

JUSTIFICATION NOTE

Presently, Hattaragi, Sampakhanda, Devanalli and Harshikatta and their surrounding areas are being fed from 2 numbers of 11 kV feeders emanating from 110/11 kV Sirsi and 1 number of 11 kV feeder emanating from 110/11 kV Siddapura sub-station.

The installed capacity of 110/11 kV Sirsi sub-station is 2x10 MVA, 110/11 kV (PL-14.4 MW, LF-0.847) Transformers and is being fed from Jog power house by 110 kV DC line with. Lynx conductor for a distance of about 48.2kms & 220 kV Esale(sirsi) sub-station by 110 kV DC line with Lynx conductor for a distance of about 6kms. The peak load recorded on .110 kV Double Circuit line feeding to 110 kV Sirsi sub-stations is 4 & 6.6 MW. Further the total connected load of 110/11 kV Sirsi sub-station is 55758 kVA on 11 kV reference.

The installed capacity of 110/11 kV Siddapur sub-station is 1x5 MVA,110/11 kV & 1x1OMVA 110/11 kV(PL-6.8 MW, LF-0.53) Transformers and,is being fed from Jog power house by 110 kV DC line with. Lynx conductor for a distance of about 18.2kms. The peak load recorded on 110 kV SC line feeding to 110kV Siddapur sub-stations is 6.6MW. The total connected load of 110/11 kV Siddapur sub-station is 63250 kVA on 11 kV reference.

The 11 kV feeders which are feeding Hattaragi, Sampakhanda, Devanalli. and Hesarkatta and surrounding' villages are having lengthy 11 kV feeders and is upto 63.7 kms. The voltage regulation is also very poor and is upto 54.2% Due to lengthy 11 kV feeders, the line fault is also more. Due to which power supply to Hattargi and surrounding villages arranged in spells.

The length of Sampakhanda feeder is about 48km with voltage regulation of 30.5%, the length of Devanhalli feeder is about 49km with voltage regulation of 31.6% & Hesarkatta feeder is 64km with voltage regulation54.2%. By constructing 110kV S/S Hattargi voltage regulation at tail end will be improve, also the number of interruption due to lengthy feeders can be reduced to the maximum extend.

Hence, some of the alternative were studied for establishing 110kV S/S Hattargi and they are as below:

1) Alternative-1 (JANMANE VILLAGE, HATTARGI CROSS SY NO: 119

Station land required: 1.00 Ha
Length of line =150 mtrs
Length of line passing through forest= 150mtrs
Extent of forest land required for construction of line = (150mtrs x 22mtrs)/10000= 0.33 Ha
Total Forest Land required= 1.33 Ha

The land identified for the construction of Sub Station is forest land to an extent of 1Ha. The line length required for construction of 110kV line is 150 mtrs which passes through forest land. Hence, extent of land required for diversion for construction of 110kV line is 0.33 Ha. The total extent of forest land required is 1.33 Ha. The indentified land is being Government Betta land which comes under protected forest category. The Regional Commissioner Belgavi

requested to obtain NOC from forest authorities for the proposal of handing over the Govt Betta Land to KPTCL. However, the proposed forest land being protected forest category, the proposed forest land cannot be diverted and hence NOC was rejected. Further the proposal for establishing 110kV S/S Hattargi at Janamane Village Hattragi Cross SY No: 119 was dropped.

2) Altenative-2 (JANMANE VILLAGE SY No: 133 & 200)

Station land required: 1.00 Ha
Length of line =NIL (The proposed station is adjacent to existing 110kV line
Length of line passing through forest= NIL
Extent of forest land required for construction of line = NIL
Total Forest land required= 1 Ha

The alternate land identified for the construction of Sub Station is also forest land to an extent of 1Ha. Construction of separate 110kV line is not required since the proposed 110kV Sub station is proposed adjacent to existing 110kV Kumta-Sirsi line corridor. But the owners of Government Betta land denied to handover the land. Hence the proposal for establishing 110kV S/S Hattargi at Janamane Village SY No: 133 & 200 was dropped.

3) Alternative-3(JANMANE VILLAGE SY No: 163)

Extent Station land required: 0.70 Ha
Length of line = 113.60 Mtrs
Extent of forest land required for construction of line = 113.6mtrs x 22 mtrs /10000=0.25Ha
Extent of land required for construction of Road= 0.0331 Ha
Total extent of forest land= 0.9831 Ha

The land identified for the construction of Sub Station is forest land to an extent of 0.70Ha.

Proposed line corridor required for construction of 110kV line is 114 Mtr. Considering 22 Mtrs line corridor, the extent of forest land required for construction of 110kV lines is 0.25 Ha & extent of forest land for construction of proposed road is 0.0331 Ha. Hence the total extent of land required for diversion is 0.9831 Ha.

From the above, it is concluded that the land identified in Alternative-3 is technicaly feasible as the extent of forest land required for diversion is less compared to Alternative-1 & Alternative-2. The number of tress to be felled is also less compared to Alternative-1 & 2. Moreover, the proposed site in altenative-3 is at the load centre for easy distribution of load.

Hence, land identified in alterative-3 i.e F SY No: 163 is considered for establishing 110kV S/S Hattargi.

C/s

Assistant Engineer(Ele)
MWSD, KPTCL, Sirsi

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