bject 10: Establishing 1x10 MVA, 110/11 kV sub-station at Kanasur in Siddapura Taluk, Uttara kannada District.

Proposed by: CEE, Bagalkot Transmission Zone.

Sketch-BGKT-3

Preamble:

Presently, Kanasur, Herur, Heggarani, Ajjibala, Marigadde and their surrounding areas are being fed from 2 numbers of 11 kV feeders each emanating from 110 kV Sirsi sub-station and 110 kV Siddapura sub-station.

The installed capacity of 110/11 kV Sirsi sub-station is 1x10 MVA, 110/12.1 kV(PL-7.2 MW, LF-0.84) & 1x10 MVA, 110/11 kV(PI-7.2 MW, LF-0.84) Transformers and is being fed from 220/110/11 kV Esle sub-station by 110 kV DC line with Dog & Coyote conductor for a distance of about 10 kms, the peak load recorded on this DC line is 75.8 MW. The total connected load of 110 kW Sirsi sub-station is 55496 kVA on 11 kV reference.

The installed capacity of 110/11 kV Siddapura sub-station is 1x10 MVA & 1x5 MVA 110/11 (PL-6.8 MW, LF-0.8)Transformers and is being fed from MGHE Jog generating station by LILOing one circuit of 110 kV Jog-Sirsi DC line with Dog & Coyote conductor, the peak load recorded on this DC line is 61 MW. The total connected load of 110 kV Siddapura sub-station is 63740 kVA on 11 kV reference.

The installed capacity of 220/110/11 kV Esle sub-station is 1x50 MVA, 220/110 kV(PL-43.8 MW, LF-1.0)Transformer and is being fed from MGHE power station by 220 kV DC line with Drake conductor for a distance of about 54 kms, the peak load recorded on this line is 336 MW.

The 11 kV feeders emanating from 110 kV Sirsi & 110 kV Siddapura sub-stations are overloaded. The length of 11 kV feeders is upto 64 kms. The power supply to these areas is being arranged in spells. The 11 kV feeders are having Rabbit & Weasel conductor and passing through forest area.

The details of 11 kV feeders feeding Kanasur, Herur, Heggarani, Ajjibala, Marigadde and their surrounding areas is as follows

| heir surrounding areas is as follows | | | | | | | |
|--------------------------------------|--|--|---|---|--|---|---|
| SI. Name of the sub-station | Name of 11 kV | Length of the line | Connect ed Load (kVA) | Peak Load in Amps | AES in MUs | VR % | AEL in MUs |
| | recuere | (in Kms) | REAL PROPERTY. | 01.00 | 3.78600 | 21.60 | 0.34305 |
| 1 110/11 kV Siddapura | Kansur | 43.35 | 5069 | 81.00 | | | |
| | | 54.15 | 6841 | 85.00 | 3.01820 | 30.69 | 0.80052 |
| | Harsikatta | | | | | | |
| | | | 1000 | 30.00 | | 9.26 | 0.18492 |
| 2 110/11 kV Sirsi | * | | | | | | |
| | | | - | 74.00 | 5.13120 | 24 99 | 1.01525 |
| | Sampakan da | 64.00 | 6185 | | | 24.55 | |
| | Name of the sub- station 110/11 kV Siddapura | Name of the substation 110/11 kV feeders 110/11 kV Kansur Harsikatta 110/11 kV Marigadde Sirsi Sampakan | Name of the substation Name of 11 kV feeders Length of the line (in Kms) 110/11 kV Siddapura Kansur 43.35 Harsikatta 54.15 Marigadde 28.00 Sirsi Sampakan 64.00 | Name of the substation Name of 11 kV feeders Length of the line (in Kms) Connect ed Load (kVA) 110/11 kV Siddapura Kansur 43.35 5069 Harsikatta 54.15 6841 110/11 kV Sirsi Marigadde 28.00 1000 Sampakan 64.00 6185 | Name of the substation Name of 11 kV feeders Length of the line (in Kms) Connect ed Load (kVA) Peak Load in Amps 110/11 kV Siddapura Kansur 43.35 5069 81.00 Harsikatta 54.15 6841 85.00 110/11 kV Sirsi Marigadde 28.00 1000 30.00 54.15 64.00 6185 74.00 | Name of the substation Name of 11 kV feeders Length of the line (in Kms) Connect ed Load (kVA) Peak Load in MUs AES in MUs 110/11 kV Siddapura Kansur 43.35 5069 81.00 3.78600 Harsikatta 54.15 6841 85.00 3.01820 110/11 kV Sirsi Marigadde 28.00 1000 30.00 2.49210 513120 513120 | Name of the sub-station Name of 11 kV feeders of the line (in Kms) ed Load (kVA) Load in Amps MUS VR % 110/11 kV Siddapura Kansur 43.35 5069 81.00 3.78600 21.60 Harsikatta 54.15 6841 85.00 3.01820 30.69 110/11 kV Sirsi Marigadde 28.00 1000 30.00 2.49210 9.26 53 mpakan 64.00 6185 74.00 5.13120 24.99 |

The length of 11 kV Harsikatta feeder is about 64 kms (Rabbit-39.05 Kms, Squirrel-15.01Kms). Load on this feeder comes after a distance of 28 Kms from 110/11 kV Siddapura sub-station end. The length of 11 kV Kanasur feeder is about 43.34 kms (Rabbit-37.94 Kms, (36)