

Justification for Locating Project in Forest/ Wildlife Area

Project: Construction of 66kV SC line on DC towers for a distance of 12.238Kms from existing 66/11kV Doddalahalli S/s to the proposed 66/11kV Hegganur S/s in Kanakapura Taluk, Ramanagara District.

The project is a part of "Establishing 1x8MVA, 66/11kV S/s at Hegganur in Kanakapura Taluk " executing by KPTCL on behalf of Ministry of Power (GOK) to provide reliable of power supply to Hegganur and Sangam surrounding village limits.

The 66kV line is starting from 66/11kV Doddalahalli village to proposed 66/11kV Hegganur substation and the line passing through Doddalahalli, Uyamballi, Haroshivahalli, Helagalli, Cheelandavadi forest/ wildlife area and Hegganur village.

Hegganur village is surrounded by Cheelandavadi forest / wild life. So, there is no option to avoid forest/ wild life. Hence, the transmission line has to passes through forest area for which the justification is given below.

1. Transmission line projects are environmentally friendly and do not involve any disposal of solid effluents and hazardous substances in land, air and water. The constructional features of 66kV line is such that it is not affecting the environment as the line is proposed along the existing road and it is not dividing the existing forest. Due to special design towers used the span length between towers will not obstruct the movement of animal/birds.
2. Three alternative route corridors were identified largely by maximizing linear sighting opportunities such as following existing roadways and power line corridors. All efforts have been made to provide minimum number of angle points. Every effort have been made to minimize and avoid forestry.

- **Route-1:** In this route, the proposed line passes through forest area for a length of 1.18Kms. The EHV line corridor in forest is 18 Mts. But in this route the 66kV line proposed to construct all along the existing Tar road using special design tower ie all power conductor lies on road side so that the number of trees comes under Extra High Voltage line corridor is going to be minimum as the trees on only one side of the towers are proposed to be cut (if necessary)/ will be trimmed periodically.
- **Route-2:** In this route, the proposed line passes through forest area for a length of 1.138Kms and it is parsley dense forest. The number of trees comes under Extra High Voltage line corridor is going to be more compared to Route-1 as both side trees are to be cut. Hence, this route is rejected.
- **Route-3:** In this route, the proposed line passes through forest area for a length of 1.07Kms. In this route, the line passes through dense forest area. The number of trees comes under Extra High Voltage line corridor is going to be more compared to Route-1 & Route-2. Hence, this route is rejected.

In view of the above, Route-1 involves the minimum forest and wild life sanctuary land.


3. Transmission Tower and Line details in Forest area:

- a. The special design single sided cross arms Narrow based towers will be used for this project inside the forest/ wildlife.
- b. The small space is required for the construction of tower foundation ie excavated area is 6.8Mtr x 6.8Mtrs, the tower foundations are beneath the ground for a depth of 3.15Mtrs and the base width of tower is 1.8 Mtrs x 1.8 Mtrs (Finishing level after tower foundation) and small portion of 0.45x0.45 Mtrs are elevated as plinth.

- c. The towers are protected by constructing fence to avoid rubbing of animals to towers and each tower will be earthened using GI flat as per IE rules.
- d. The transmission line is proposed along Kanakapura – Sangam Road hence involving minimum trees beneath the line to be cut and also allowing free movement of animals/birds due to high tower height of 32 Mtrs.
- e. The ground clearance of lower most conductors is 23 Mtrs. The spacing between the phase conductor is 2.1 Mts.
- f. The power conductors are facing towards existing road side in top 3 cross arms at a height of 23 Mtrs from ground level.
- g. In order to avoid snapping of power conductor double tension stringing sets will be provided.
- h. The periodical maintenance will be carried out in the line as per KPTCL norms.
- i. The bird deflector will be provided to transmission line.
- j. The route is selected such that the birds/ animals are already habituated to the presence of road and thereby reducing the obstruction to the movement of birds/animals.

4. Under Ground Cable in Forest/ Wildlife area is not feasible due to following reasons:

Hegganur village is remote area in Kanakapura Taluk and it is 70 Kms away from Bengaluru city. KPTCL is placing Extra High Voltage Under Ground Cables only in City limits/ Industrial areas. If any fault occurs in Underground cable it will take minimum one day to identify the fault and for rectification it will take another day as the materials will not be available in and around Kanakapura Taluk and there is no alternate 66kV source to substation. Hence, thereby causing delay in restoration of power supply to households / Irrigation pumps. Hence, Underground cable is not feasible in the said work.


Executive Engineer(Ele).,
RMWD, KPTCL, Old B.M.Road.
Ramanagara - 562159.