

**DETAILED PROJECT REPORT AND JUSTIFICATION FOR LOCATING THE PROJECT IN
FOREST LAND**

(Construction of approach road to Establishment of 2X500 MVA 400/220 kV Substation)

PROJECT BACKGROUND

The peak demand met by Goa during the year 2014-15 was 489 MW and as per the 18th EPS, the peak demand of 815 MW was expected by the end of 12th Plan (2016-17) and 1192 MW by the end of 13th plan (2021-22). At present demand of Goa is mainly catered through Mapusa 3x315 MVA, 400/220 kV substation, which gets feed from Kolhapur 400 kV substation through a 400 kV D/c line. Goa system is also connected with Maharashtra and Karnataka through 220 kV lines. To supply the projected power requirement of Goa with reliability, an additional 400 kV in feed to Goa was required. The matter was discussed in the 38th meeting of Standing Committee on Power System Planning in Western Region, held on 17-07-2015 at New Delhi wherein the provision for a new 400kV S/s in Goa at Xeldem along with its interconnections with the Inter State Transmission System was agreed. Accordingly, following transmission system was discussed and approved in the 39th & 40th SCM of WR held on 30.11.2015 & 01.06.2016 respectively and 39th & 40th SCM of SR held on 28-29.12.2015 and 19.11.2016 respectively.

Additional 400kV feed to Goa

LILO of one ckt. of Narendra (existing) – Narendra (New) 400kV D/c quad line at Xeldem.

Xeldem – Mapusa 400kV D/c (quad) line.

Establishment of 2x500MVA, 400/220kV substation at Xeldem

Xeldem- Xeldem (Existing) 220 kV HTLS D/C Line.

JUSTIFICATION

The construction of approach road is required to Establishment of 2X500 MVA 400/220 kV Substation at Sangod to meet our arising power deficit through present network system. During survey of this approach road we came to know that the road passes through forest patch of North Goa Forest Division. Although this has been ensured that the incurred forest area should be minimum & unavoidable. Details & comparative statement of all 3 alternate routes are shown as below: -

Comparative Statement of three alternative routes			
Description	Alternate Route 1 (Proposed Route)	Alternate Route 2	Alternate Route 3
Bee Line Length	0.460 Km	0.460 Km	0.460 Km
Road Length	0.555 Km	0.728 Km	0.878 Km
Forest Length	0.555 Km	0.728 Km	0.878 Km
Forest Area (Ha)	0.555 Ha	0.728 Ha	0.878 Ha
Density of Forest Area	Moderate Dense	Moderate Dense	Moderate Dense

To confirm the forest area is minimum & unavoidable, we have worked out all possibility from Panaji- Belgam Highway to proposed Substation area.

In view of all above, it is concluded that best possible efforts have been made to minimize involvement of forest land for construction of the project which shall strengthen the transmission network in Western Region.

LEGAL FRAMEWORK

The Prior approval of the Government of India under Section 68 of the Electricity (Supply) Act, 2003 for the subject project has been obtained vide MoP's letter dated 15.06.2017. It is proposed to execute the transmission scheme as provision contained in the Indian Electricity Act, 2003 and the rules made there under and the Electricity (Supply) Act, 1910 and 1948, in so far as these are applicable.

