

CLIENT: POWER GRID CORPORATION OF INDIA LIMITED				
AGENCY: KEC International Limited.				
Name of the Line: 132kV S/C (on D/C Tower) From Khuppi S/S to Seppa S/S				
COMPARATIVE STATEMENT OF ALTERNATIVE ROUTES				
Sl. No.	DESCRIPTION	ALTERNATIVE ROUTE I	ALTERNATIVE ROUTE II	ALTERNATIVE ROUTE III
1	Route Particulars	Line Length as per LOA (km) =60 km		
		Bee Line Length (km) =36.942 km		
	(i) Length (km)	48.171	53.532	54.435
	(ii) No. of angle points	137	156	147
	(iii) Type of Terrain			
	A) Hill (km)	33.951	48.553	54.390
	B) Plain (km)	14.220	4.979	0.000
2	Environmental Impact			
	(i) Town limits	The line is routed avoiding towns. Due to scattered nature of settlements, the line has to be routed close to certain major villages Khuppi, Ramda, Palazi, Bana, Pompoli, Seppa	The line is routed avoiding towns. Due to scattered nature of settlements, the line has to be routed close to certain major villages Khuppi, Ramda, Palazi, Bana, Pompoli, Seppa	The line is routed avoiding towns. Due to scattered nature of settlements, the line has to be routed depart from various villages.
	(ii) Houses within R.O.W.	R.O.W. is almost free from houses etc.	R.O.W. exists for already constructed houses, market area and proposed army camp etc.	R.O.W. is almost free from houses etc.
	(iii) Tree/Crop and its extent of damage	Damages to crops in wet cultivation area is marginally low due to less cultivated area. Even though the whole line route comes under forest.	Crops may be damaged in wet cultivation area is marginally low due less cultivated area. Even though the whole line route comes under forest.	The whole line passing through forest.
	(iv) Forest involvement			
	a) Length of forest area	100 Percent	100 Percent	100 Percent
	b) Type of forest	Tropical Forest	Tropical Forest	Tropical Forest
	c) Density of forest	Low dense	Moderately dense	highly dense
	d) Forest	Tenga Reserve Forest, Unclassified state Forest (USF)	Tenga Reserve Forest, Unclassified state Forest (USF)	Tenga Reserve Forest, Unclassified state Forest (USF)
	e) Type of Fauna & Flora	Flora : Teak, Sal, Holong, Wild Banana, Bamboo etc.	Flora : Teak, Sal, Holong, Wild Banana, Bamboo etc.	Flora : Teak, Sal, Holong, Wild Banana, Bamboo etc.
		Fauna : Indian wild dog, wild boar, deer, snakes, Elephant etc.	Fauna : Indian wild dog, wild boar, deer, Snakes, Elephant etc.	Fauna : Indian wild dog, wild boar, deer, snakes, Elephant etc.
	e) Endangered Species if any	Nil	Nil	Nil
	f) Historical/ cultural monuments	Nil	Nil	Nil
	g) Details of Tribal areas if any	Nil	Nil	Nil
3	Details of Crossing			
	a) Nos. of Railway Crossing	Nil	Nil	Nil
	b) Nos. of Major Road Crossing			
	i) National Highways	25	29	4

CLIENT: POWER GRID CORPORATION OF INDIA LIMITED				
AGENCY: KEC International Limited.				
Name of the Line: 132kV S/C (on D/C Tower) From Khuppi S/S to Seppa S/S				
COMPARATIVE STATEMENT OF ALTERNATIVE ROUTES				
Sl. No.	DESCRIPTION	ALTERNATIVE ROUTE I	ALTERNATIVE ROUTE II	ALTERNATIVE ROUTE III
	ii) State Highways	5	6	Nil
	c) Nos. River Crossing including major stream			
	i) Major River	2	2	2
	ii) Small River/Stream	5	6	4
	d) Nos. Power Line Crossing:			
	(i) 765 kV T/L	Nil	Nil	Nil
	(ii) 500 kV T/L	Nil	Nil	Nil
	(ii) 400 kV T/L	Nil	Nil	Nil
	(ii) 220 kV T/L	Nil	Nil	Nil
	(iv) 132 kV T/L	Nil	Nil	1
	(v) 33 kV T/L	20	25	12
4	Compensation cost	The compensation is required where tree cutting is envisaged of the Reserve Forest.	The compensation is required where tree cutting is envisaged of the Reserve Forest.	The compensation is required where tree cutting is envisaged of the Reserve Forest.
4	Construction problems	Transportation Issue may come in approx. 6 km of line due to non availability of approach.	There is no road connectivity along 10.5 Kilometer approx of the line so there will be transportation issues.	There is no road connectivity along 90% of the line so there will be transportation issues.
5	O&M problems	O&M problems are comparatively less in this alignment due to more approach roads, nearer to city limits and more plain areas.	O&M problems are comparatively more in this alignment due to less approach roads, less city limits and hilly area all along route.	O&M problems exists for a stretch of approx 90% due to hilly terrain and also there is no proper approach road.
6	Approaches along the route	60% of the line is easily approachable and the rest 10% has no road connectivity. 30% of the route moderately approachable.	50% of the line is easily approachable and the rest 30% has no road connectivity. 20% of the route moderately approachable.	25% of the line is easily approachable and the rest 75% has no road connectivity.
7	Recommendations	This alternate is shortest in route length with less angle points than Alt-II and Alt-III. Some locations are easily approachable except hilly which enables easy construction and maintenance of T/L and a new highway is under construction by NHAI. Hence, this alternative route is most optimum, so is being recommended.	The route length of this alternate is moderately longer, far from the Bee line with more angle point and some location are not easily approachable, location are as far as 10.0km to 11.0km and being at high hilly unstable area, thus making this alternate less economical, more O&M cost and thus makes this alternate not to be recommended.	The route length of this alternate is longest, far from the Bee line with more angle point and some location not approachable thus making this alternate less economical, more O&M cost and thus makes this alternate not to be recommended.