



JUSTIFICATION FOR LOCATING THE TRANSMISSION LINE IN FOREST AREA

This transmission line project is to be built as part of the Bulk Power Transmission Agreement (BPTA) between PGCIL and BALCO for the inter-state transfer of power through the National Grid of PGCIL. The route of this dedicated line is passing through nominal stretches of revenue, protected and orange forests.

To select the optimal route that involves minimal use of Forest land that provides the best construction and maintenance facilities, besides being cost effective. A comparison of the three alternative routes has been illustrated.

As can be seen from the Topo Map on which all the three alternative routes have been clearly marked out in different colours, routes 2 and 3 both have long stretches of common portions with route 1.

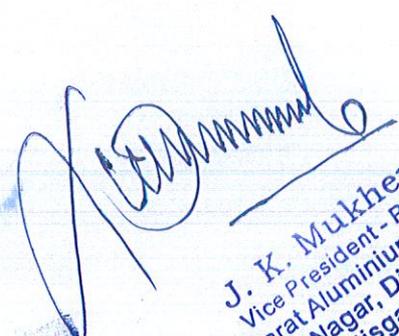
Routes 1 and 3 use a portion of the existing interim 400 KV LILO Line of BALCO. Route 1 is using existing towers 1 to 6 of the LILO Line, while Route 3 is using existing Tower No 7 of the LILO Line, in addition to tower Nos 1-6. Route No 3, thereafter, takes off on a more or less independent stretch, skirting away towards the right hand side of the BALCO premises.

As far as Route No.2 is concerned, it starts off independently, unlike Routes 1 & 3, but its independent portion is quite minimal and is limited only to the approach areas of the existing BALCO Substation. While in this alternative there is indeed a reduction of the route length, this alternative could not be considered seriously, for the reason that this route would have necessitated multi-circuit towers in the BALCO substation side of the line, which would have been rather difficult to implement as well as accommodate due to space constraint.

Thus, the obvious choice for the most optimum route happens to be Route No.1, when compared with the other two routes(Route No.2 & 3).

Summarising, the factors in favour of selecting Route 1 are as follows:-

- ✓ The route length for Route 1 is less by about 2.5 km compared to Route 3
- ✓ The involvement of forest stretches in this route is minimum.
- ✓ ROW and other related problems in this route are much less as compared to Route 3.
- ✓ Due to the proximity of Route 1 to the main thoroughfares in the area, construction as well as operation & maintenance problems would be much less in Route 1.
- ✓ For the same reasons, the availability of construction materials would be much better.
- ✓ Although Route 3 has the advantage of lesser power line and railway crossings, these are outweighed by the advantages in favour of Route 1 as mentioned above.



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COMPARISON STATEMENT-A
(COMPARISON OF PHYSICAL ASPECTS)

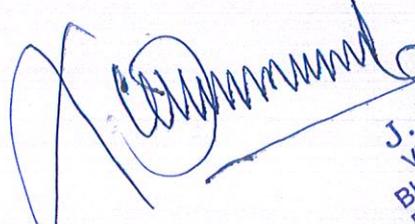
DESCRIPTION	ROUTE-1	ROUTE-2	ROUTE-3
Line Length	22.919 K.M.	17.981 K.M.	25.382 K.M.
Angle Points	48	36	33
Hilly Terrain	-	-	-
Plain Terrain	22.919 K.M.	17.981 K.M.	25.382 K.M.
Forest (PF)	0.80 Kms	0.80Kms	4.5Kms
Transportation & Maintenance Convenience	95%	80%	70%
Power Line Crossing	7Nos 220 KV line	2Nos 220 KV line	3Nos 220 KV line
Railway Crossing	2 Nos.	-	-
River Crossings Major	Nil	Nil	Nil
Pollution	Low	Medium	High
Marshy Areas	Nil.	Nil.	Nil.
Major Cities	Minimum	Minimum	Maximum
Densely Populated Areas	Nil	Minimum	Minimum
Century Areas	Nil	Nil	Nil
Defence Areas (Military Areas)	Nil	Nil	Nil
NH	Nil	Nil	Nil
Animals	Nil	Nil	Nil
Coal Belt Areas	Nil	Nil	Nil



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COMPARISON STATEMENT-B
(COMPARISON OF ENVIRONMENTAL & SUBJECTIVE ASPECTS)

Sr No.	DESCRIPTIONS	ROUTE-I	ROUTE-II	ROUTE-III
	2	3	4	5
1	Route Particulars (i) Length	22.919 K.M.	17.981 K.M.	25.382 K.M.
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 towns.	The line is routed avoiding crossing of any towns. Due to scattered nature of settlements, the line has to be routed close to certain towns.	The line is routed avoiding crossing of any towns. Due to scattered nature of settlements, the line has to be routed close to certain towns.
	(ii) Houses within R.O.W.	R.O.W. is almost free from houses etc.	R.O.W. Problems exist but not very substantial	R.O.W. Problems exist but not very substantial
	(iii) Tree/Crop and its extent of damage	Damage to crops in wet cultivation area is unavoidable during cultivation season. There are some scattered sugarcane & wheat growing areas besides majority of mustard crops. Scattered trees of different variety (fruit & non fruit bearing) lie in private land in alignment-I. Comparatively, crop and tree damages shall be less in this alignment.	Damage to crops in wet cultivation area is unavoidable during cultivation season. There are some scattered sugarcane & wheat growing areas besides majority of mustard crops. Scattered trees of different variety (fruit & non fruit bearing) lie in private land in alignment - II. Comparatively crop and tree damages shall be Medium in this alignment	Damage to crops in wet cultivation area is unavoidable during cultivation season. There are some scattered sugarcane & wheat growing areas besides majority of mustard crops. Scattered trees of different variety (fruit & non fruit bearing) lie in private land in alignment - II. Comparatively crop and tree damages shall be High in this alignment
	(iv) Endangered Species if any	-NIL-	-NIL-	-NIL-
	(v) Historical/ Cultural monuments	-NIL-	-NIL-	-NIL-
	(vi) River Crossing (major)	-NIL-	-NIL-	-NIL-
3	Compensation Cost	Crop compensation is required to be paid during cultivation season. The tree compensation would be required where tree cutting is envisaged involving some Tamarind etc.	Crop compensation. is required to be paid during cultivation season. The tree compensation would be required where tree cutting is envisaged involving some Tamarind etc.,	Crop compensation is required to be paid during cultivation season. The tree compensation would be required where tree cutting is envisaged involving some Tamarind etc.,
4	Construction Problems	-NIL-	-NIL-	-Mining area-
5	O & M Problems	-NIL-	-NIL-	-NIL-
6	Other Aspects	There are no other complications in this route	<u>This route would not be practically feasible as it passes over an existing 220KV Line.</u>	There are no other complications in this route


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