BRIEF NARRATIVE OF THE SCHEME

1. PREAMBLE

1.1 The state of Sikkim is spread through 7096 sq. km and 4 no of districts. The peak demand of Sikkim is expected to grow from 70MW to 144 MW by the end of XII plan and to 176 MW by end of XIII plan. At present there was only two 132 kV sub-station in Sikkim. The load centers are dispersed & isolated and did not get benefit of grid connected power over the year.

1.2 Energy & Power Department, Govt. of Sikkim, in abbreviated EPDS, the State Transmission& Distribution Utility, Govt. Of Sikkim planned to develop network so that affordable, secure and reliable power could be made available to various locations of the state. So, EPDS take up the job of constructing suitable transmission lines and Sub-stations for evacuation of power generation from existing & upcoming Hydro Projects in Sikkim to the four District of Sikkim. EPDS has planned to construct 19 nos. of sub-station and 29 nos of transmission lines and 08 nos. of bays extension for Strengthening of power transmissions and distributions in Sikkim State for overall integrated power development.

2. DESCRIPTION OF PROJECT

2.1 The proposed 66 KV transmission lines constituting:

i) 220/132/66 KV Samardong GIS Sub-station.
ii) 66/11 KV Namthang Sub-station.
iii) 66 KV Samardong – Mamring (Namthang) Transmission line on Double Circuit Tower.

2.2 Geographic area of the Scheme in Sikkim:

1	220/132/66 KV Samardong GIS Sub-station.	Name of Village – Samardong, Tsalumthang, Rekip. District – South Sikkim
2	66/11 KV Namthang Sub-station.	Name of Village – Pamphok, Namthang. District – South Sikkim
3	66 KV Samardong-Mamring (Namthang) Transmission Line on Double Circuit Tower.	Route description: Tshalumthang, Samardong, Karek-Kaizalay, Kabrey, Nagi, Palitam & Pamphok.

Additional Chief Engineer
Energy & Power Department
Government of Sikkim
Gangtok

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2.3 The enclosed map plotted on traced Survey of India Topo sheet of 1:50000 scale (1cm=0.5 km) shows the route alignment of transmission line proposed under the scheme.

3. ACCRUAL OF BENEFIT OF THE SCHEME

Affordable, secure and reliable power could be made available to various locations of the state and development of industries and agriculture beside relief to domestic consumers in the entire Sikkim state. The increase in installed capacity of Electric Power shall help to achieve GDP growth. Sikkim state will have their free quota of energy generated as per present practice which will make the state power surplus/self-reliant on its energy demand in addition to inflow of revenue from sale of excess power.

4. DESCRIPTION OF THE ROUTE

The terrain encountered for all the lines 100 % hills. The MSL of the tower locations vary from 1569.74 mtr to 365.83 mtr. The corridor for 66 KV line in this area is very limited considering the treacherous terrain and involvement of forest could not altogether be avoided. The route has been so aligned to avoid Wildlife areas and to pass through bare minimum forest area. Thus to obtain a suitable corridor for laying of the line way leave through forest is necessary.

5. CONCLUSION

The Hydro-electric Projects being developed by the various Independent Power Producers as mentioned above having their Power Houses and associated AIS & GIS Switchyards at different area in Sikkim. Energy & Power Department (Govt. of Sikkim), the State Transmission & Distribution Utility, has to make its transmission system ready for evacuation of power matching with target of commissioning of Generating units. The Sikkim state will have their free quota of energy generated as per present practice which will make the state power surplus/self-reliant on its energy demand in addition to inflow of revenue from sale of excess power.

As all the relevant environmental and forest clearances have been accorded to various Hydro Projects, clearance may also be accorded for diversion of minimum forest land for laying of transmission line for evacuation of generation of various HEPs without any hindrance.

Additional Chief Engineer
Energy & Power Department
Government of Sikkim
Gangtok

JUSTIFICATION OF SELECTING THE ROUTE IN SOUTH TERITORIAL AFTER EXAMINING ALL THE ALTERNATIVES

66 KV SAMARDONG TO MAMRING (NAMTHANG) TRANSMISSION LINE ON DOUBLE CIRCUIT TOWER

Sl. No	Criteria	Alternative-I	Alternative-II	Alternative-III
01	Approach Road & Accessibility	Approx. 1.0 kms walking needed to reach line	Approx. 1.5 kms walking needed to reach line	Approx. 1.85 kms walking needed to reach line
02	Stability of the Area	Stable	Less Stable	2/3 hill slide zones found
03	Vicinity to Towns	Passing by the side of the Namthang & Nagi.	Passing by the side of the Namthang, Nagi & Karek.	Passing by the side of the Namthang, Nagi & Karek.
04	Forest involvement & tree involvement in Forest	Minimum Forest Land- 4.2613 Ha,	More than Alt-I Forest Land- 4.305 Ha approx.	More than Alt-I& Alt-II Forest land- 4.90 Ha approx.
05	Number of trees actually to be felled out of enumerated trees (considering hills)	No. of Trees -1000 Nos (including 200 Poles) 775 Nos. Approx. 77% (as most of the forest land fall in valley)	No. of Trees – 1000 Nos (including 200 Poles) 850 Nos. Approx. 85% (as ½ of the forest land fall near hill top)	No. of Trees- 850 Nos. (including 150 Poles) 930 Nos. Approx. 93% (as most of the forest land fall around hill top)
06	Wildlife Sanctuary	Nil	Nil	Nil
07	Rich Crop in the Corridor	Less	Moderate	More
08	Right of Way resistance	Less	Comparatively more	More than Alt-I& Alt-II
09	Suitability from O&M point of View	Most suitable	Suitable	Less Suitable

(SELECTED)

Additional Chief Engineer
Energy & Power Department
Government of Sikkim
Gangtok