COST BENEFIT ANALYSIS

Project: Diversion of 137.014 Ha. of Forest land for laying of 765 kV D/C Dharmjyagarh – Raigarh (Tamnar) Pool Transmission Line in the State of Chhattisgarh under the "Additional 400 Kv Feed to Goa and Additional System for Power Evacuation from Generation Projects pooled at Raigarh (Tamnar) pool".

Table B- Estimation of cost of forest diversion (as per MoEF&CC Guideline dated 1st Aug 2017 related to cost benefit analysis)

Sl No	Parameters	Remarks (For Transmission Line)
1	Ecosystem Services losses due to proposed forest diversion	NPV of the forest land being diverted i.e Reserve, Protected & Orange Forest =85.228 ha x Rs. 8.03 lac= Rs 684.38 lac For Revenue Forest = 51.736 ha x Rs 6.26 lac = Rs 323.86 lac Total = **Rs 1008.24 lac**
2	Loss of animal husbandry productivity including loss of fodder.	Not applicable. Productivity of livestock will not be affected due to construction of transmission line. 10% of NPV Applicable i.e. **Rs 100.824 lac**
3	Cost of human resettlement.	Since there is no displacement of people due to the project hence there would be no cost of human resettlement.
4	Loss of public facilities & administration infra-structure (roads, building, school, dispensary, electric lines, railways etc.) on forest land or which would require forest land if these facilities were diverted due to project.	Not applicable, Since these facilities are not available inside the forest area for proposed diversion. The route/corridor of the Transmission line not affecting any public facilities on diverted forest land.
5	Possession value of forest land diverted.	30% of Environmental Costs (NPV) i.e **Rs 302.47 lac**
6	Cost of suffering of oustees	Not applicable since there will be no displacement of peoples.
7	Habitat Fragmentation Cost	50% of NPV Applicable as thumb rule i.e **Rs. 504.12 lac**
8	Compensatory Afforestation and Soil & Moisture Conservation Cost	**Comp. Affn. cost Rs. 1815.00 Lac** **Soil & Moisture Conservation cost included in Comp. Affn. cost.**
Total Loss (Against the proposed forest land diversion)		**Rs.3730.654 or 3730.00 lacs**

Table C- Estimation of Benefit of Forest Diversion in Cost Benefit Analysis (as per MoEF&CC Guideline dated 1st Aug 2017 related to cost benefit analysis)

SNo	Parameters	Remarks (For Transmission Line)
1	Increase in Productively attribute to the specific project.	There are 2400 MW increase in productively attributes to this project (4415040 lacs) for 35 years
2	Benefit to economy due to the specific project	Rs 493500 Lacs
3	No of population benefited due to specific project	The said transmission line will bring power evacuation of 3000 MW from Jindal Power ltd & TRN Energy ltd. For power evacuation reliably transmission system planned , resulting many local population of Chattisgarh state will be benefited.
4.	Economic benefit due to direct and indirect employment due to the project	7313 lacs
5.	Economic benefits due to Compensatory Afforestation	Rs.6.60 lac x 275.0 ha (as per Guideline issued by MoEF vide letter No.F.No.5-3/2007_FC Dt.05.02.2009) = Rs.1815.00 lac
	T o t a l	**Rs.502628.00 lac**

C. Cost Benefit Ratio i.e Project Benefit (A) / Forest loss (B) = 134.7 i.e 135

Hence the Project has very high benefit to the country as compared to forest loss.

The benefit to loss ratio is approximate 135 times.

Goa Tamnar Transmission Project Ltd.

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