

COST BENEFIT ANALYSIS

Project: Diversion of **24.602 Ha** of Forest land for laying 132 kV D/C Pare HEP to Lakhimpur Transmission Line in the State of Arunachal Pradesh.

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

S. No.	Parameters	Remarks (For Transmission Line)
1	Ecosystem Services losses due to proposed forest diversion	NPV of the forest land being diverted i.e., 1) RF = 24.602 ha x Rs. 9.39 lakhs Total = Rs. 231.0128 lakhs
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. 23.1013 lakhs
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 infrastructure (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. 69.3038 lakhs
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. 115.5064 lakhs
8	Compensatory Afforestation and Soil & Moisture Conservation Cost (CA arrived at Rs 200000 /Ha for Double degraded area)	Comp. Afforestation cost Rs. 98.4080 Lakhs Soil & Moisture Conservation cost included in Comp. Afforestation cost.
Total Loss (Against the proposed forest land diversion)		Rs. 537.3323 say 537 lakhs

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)

S. No.	Parameters	Remarks (For Transmission Line)
1	Increase in Productively attribute to the specific project.	Project cost (290304 lakhs) for 35 years
2	Benefit to economy due to the specific project	NA
3	No. of population benefited due to specific project	Due to this interstate power system people in the state of Arunachal Pradesh will be benefited.
4.	Economic benefit due to direct and indirect employment due to the project. During Project Construction Stage: The project will provide employment to 15 Permanent & 400 Temporary employment for a period of 18 months. (Rs 2437.5 Lakhs) During Operation & Maintenance Phase (for 35 Years): The project will provide employment to 6 Permanent & 20 Temporary employment for a period of 35 years. (Rs 5600 Lakhs) (For Permanent employment avg. benefit of Rs 15 Lakhs/year /person and for temporary employment 3.5 lakhs/year/person).	Rs 8037.5 lakhs
5.	Economic benefits due to Compensatory Afforestation	Rs. 2 lakhs x 24.602 ha x 2 (as per Guideline issued by MoEF&CC vide letter No.F.No.5-3/2007_FC Dt.05.02.2009) = Rs. 98.4080 lakhs
	T o t a l	Rs 298440 lakhs

C. Cost Benefit Ratio i.e. Project Benefit / Forest loss = 555.75:1

Hence, the Project has very high benefit to the country as compared to forest loss. **The benefit to loss ratio is approximate 556 times.**

For Vapi II-North Lakhimpur Transmission Limited



Authorized Signatory