

## **COST BENEFIT ANALYSIS**

**Project:** Revised proposal for diversion of 48.987 ha Forest land for construction of 132 kV D/C Transmission Line from Biswanath Chariali to Itanagar in the state of Arunachal Pradesh under “NER II Transmission Limited”.

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

<b>S. No.</b>	<b>Parameters</b>	<b>Remarks (For Transmission Line)</b>
<b>1</b>	Ecosystem Services losses due to proposed forest diversion	NPV of the forest land being diverted i.e. Reserve Forest = 48.987 ha X Rs. 9.39 lac=Rs 459.988 lacs <b>Total = Rs 459.988 lac</b>
<b>2</b>	Loss of animal husbandry productivity including loss of fodder.	Productivity of livestock will not be affected due to construction of transmission line. 10% of NPV Applicable i.e. <b>Rs. 45.99 lac</b>
<b>3</b>	Cost of human resettlement.	Since there is no displacement of people due to the project hence there would be no cost of human resettlement.
<b>4</b>	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.
<b>5</b>	Possession value of forest land diverted.	30% of Environmental Costs (NPV) i.e. <b>Rs. 137.996 lacs</b>
<b>6</b>	Cost of suffering of oustees	Not applicable since there will be no displacement of peoples.
<b>7</b>	Habitat Fragmentation Cost	50% of NPV Applicable as thumb rule i.e. Rs. <b>229.994 lac</b>
<b>8</b>	Compensatory Afforestation and Soil & Moisture Conservation Cost	<b>Comp. Affn. cost Rs. 342.909 Lac (Approx. 3.5 lac/Ha) Soil &amp; Moisture Conservation cost included in Comp. Afforestation cost.</b>
<b>Total Loss (Against the proposed forest land diversion)</b>		<b>Rs. 1216.886 lacs</b>

**Table B- 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.	There are 160 MW increase in productively attributes to this project (829400 lacs) for 50 years.
2	Benefit to economy due to the specific project	<b>Rs 829400 Lacs</b>
3	No of population benefited due to specific project	The said transmission line will bring evacuation of 160 MW from Biswanath Chariali to Itanagar under NER II Transmission Limited. Due to this interstate power system people in the states of Arunachal Pradesh will be benefited.
4	Economic benefit due to direct and indirect employment due to the project	<b>778 lacs</b>
5	Economic benefits due to Compensatory Afforestation	Additional C.A. for 97.98 ha of degraded forest land @ Rs. 3.5 lac/ha for 50 years (as per Guideline issued by MoEF vide letter No.F.No.5-3/2007_FC Dt.05.02.2009) = <b>Rs. 342.909 lac.</b>
	<b>T o t a l</b>	<b>Rs. 830520.9 lacs</b>

**C. Cost Benefit Ratio i.e. Project Benefit / Forest loss = 683:1**

Hence, the Project has very high benefit to the country as compared to forest loss. **The benefit to loss ratio is approximate 683 times.**

  
**(NAROTTAM CHAKRABORTY)**  
**Chief Manager**  
**NER II Transmission Ltd.**