

**JHARKHAND URJA SANCHARAN NIGAM LIMITED**  
**Office of Electrical Superintending Engineer**  
**Transmission Circle, Daltonganj.**

**Table-A : Cases under which a cost-benefit analysis for forest diversion are required**

NO	Nature of Proposal	Applicable/not applicable	Remarks
1	All categories of proposals involving forest land upto 20 hectares in plains and upto 5 hectare in hills	Not applicable	These proposals may be considered on a case to case basis and value judgment.
2	Proposal for defense installation purposes and oil prospection (prospection only)	Not applicable	In view of national Priority accorded to these sectors, the proposals would be critically assessed to help ascertain that the utmost minimum forest land is diverted for non-forest use
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not applicable	These activities being detrimental to protection and conservation of forest, as a matter of policy, such
4	All other proposals involving forestland more than 20 hectares in plains and more than 5 hectare in hills including roads, transmission lines, minor medium and major irrigation projects hydro projects mining activity railway lines location specific installations like micro-wave stations auto repeater centres.TV towers etc.	Applicable	These is the Dc power substation Transmission line which is locating in the Dist.- Palamu, Block Chattarpur. there is involving total land Ha. and total JJ area 2.43 Ha area belongs to mouza Rudba Block Chattarpur.

**Table-B Estimation of cost of forest diversion.**

	Parameters	Remarks
1	Ecosystem service losses due to proposed	Considering the Net present value of forest area to be diverted be 8.03 Lakh per Ha as per density in Eco class III Hence losses to Eco system: $8.03\text{Lakh} \times 2.43 = 19.51 \text{ Lakh}$
2	Loss of animal husbandry productivity, including loss of fodder	$8.03\text{Lakh} \times 2.43 \times 10\% = 1.95 \text{ Lakh..}$
3	Cost of human resettlement	There is no Human Resettlement involved in the project. Hence losses : <b>NIL</b>
4	Loss of public facilities and administrative infrastructure (roads, building ,School, dispensaries,	There is no loss of public facility and administrative infrastructure due to this project.

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	electric lines railways, etc.)on forest land if these facilities were diverted due to the project	Hence losses : <b>NIL</b>
5	possession value of forest land diverted	Considering 30% of environmental costs (NPV) due to loss of forest. Hence losses: $8.03 \text{ Lakh} \times 2.43 \text{ Ha} \times 30\% = \mathbf{5.85 \text{ Lakh}}$
6	Cost of suffering to outers	There is no rehabilitation of people, hence no social losses. Losses: <b>NIL</b>
7	Habitant fragmentation Cost	No Habitant fragmentation will be at their construction of Transmission line. Hence losses : <b>NIL</b>
8	Compensatory a forestation and soil & moisture conservations cost	Considering 4Lakh/Ha including CA and soil & Moisture conversation cost Hence Total Losses: $4 \text{ Lakh} \times 2.43 \text{ Ha.} = \mathbf{9.72 \text{ Lakh}}$

**Table-C -Existing guidelines for estimating of forest-diversion in CBA.**

Sr.No.	Parameters	Remarks
1	Increase in productively attribute to the specific project	Power Flow : 2X50MVA Load Factor : 60% Power Factor :0.8 Losses:2.5% Average value added : Rs 6.00 per kwh Energy sent out every year: $2 \times 80 \times 100 \times 0.6 \times 0.8 \times 0.975 \times 365 \times 24 = 65594880 \text{ Kwh (unit)}$ Value addd: $65594880 \times 6 = \text{Rs. } 393569280 = \mathbf{39356 \text{ Lakh /Year}}$
2	Benefits to economy due to the specific project	Same as above.
3	No of population benefited due to specific project	Assuming average 10 Units consumption per day per household.
4	Economic benefits due to of direct and indirect employment due to the project	As per the Detailed project report. The project requires an average of 200 man force for 18 months with an average of 200 days/year $30,000 \text{ man day's} \times \text{Rs. } 300 = \mathbf{90.00 \text{ Lakh}}$
5	Economic benefits due to compensatory a forestation	Considering it to be equivalent to the NPV on the area to be diverted. Hence benifits: $8.03 \text{ Lakh} \times 2.43 \text{ Ha.} = \mathbf{19.51 \text{ Lakh}}$

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**Total loss of Environment : 37.03Lakh**

**Benefits of Economy : 39465.51Lakh**

**Cost of Ratio : Total Loss to Environment: Benefits to economy**

**=37.03: 39465.51**

**= 1: 1065.77**

**Signature**

**:**

  
18.04.19  
**SENIOR MANAGER**  
**TRANSMISSION DIVISION**  
**DALTONGANJ**

**Name in blocks letters : SUNIL HANSDAK**

**Designation**

**: Sr. Manager**

**Address**

**: Jharkhand Urja Sanchran Nigam Limited.  
Transmission Circle Daltonganj, Jharkhand**