

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

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	This is the case which is comes under below 20 Ha. plain area
2	Proposal for defense installation purposes and oil prospection (prospection only)	Not applicable	No, this proposal is involved power transmission project and it's also for the Govt. Development work.
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not applicable	Assuming averages 10 UNITS consumption per day household. Total of Around 1,495200 households can be provided electricity per year.
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 below 20 Ha area for establishment new power transmission lines.

Table-B Estimation of cost of forest diversion.

	Parameters	Remarks
1	Ecosystem service losses due to proposed	No Eco system will be harassed with construction due no nearest NATIONAL PARK within the 5 km radius as per MOEF GUIDELINE.
2	Loss of animal husbandry productivity, including loss of fodder	No any losses for human husbandry due to this land is in JJ and there is no huge tree and plantation.
3	Cost of human resettlement	It is not needed due no habitation surrounding the applied area and nearest .
4	Loss of public facilities and administrative infrastructure (roads, building ,School, dispensaries, electric lines railways, etc.)on forest land if these facilities were diverted due to the project	NIL- For total cost =(i)+(v)=0.3511+5.53=5.881 CR. The total value of benefits =(1)+(4)=369+1.0=370 CR. Hence cost benefit Ration =5.881 CR.370 CR. =1:62.91 Say -1:63

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5	possession value of forest land diverted	I agreed the terms and condition of NPV 30 % amount have to be paid
6	Cost of suffering to outees	NO any suffering with this already gram sabha has been done and FRA -I also considered by the concerned authority.
7	Habitant fragmentation Cost	Not will be used for this Habitant fragmentation due to no any settlement surrounding the applied area.
8	Compensatory a forestation and soil & moisture conservations cost	Agree and it will definitely did by by us as per the condition of yours.

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

Sr.No.	Parameters	Remarks
1	Increase in productively attribute to the specific project	To be quantified & expressed in monetary terms avoiding double counting
2	Benefits to economy due to the specific project	The incremental economic benefit in monetary terms due to the activities attributed to the specific project.
3	No of population benefited due to specific project	As per the Detailed project report
4	Economic benefits due to of direct and indirect employment due to the project	As per the Detailed project report.
5	Economic benefits due to compensatory a forestation	Power flow = 2x50mva Load factor = 80% Power factor = 0.8 Losses = 2.5% Average value added = Rs.6.00 per kwh Energy sent out per year = $2 \times 50 \times 10 \times 0.6 \times 0.8 \times 0.975 \times (365 \times 24)$ = 409,968,000 kwh (unit), Value added = Rs. 245,980,8000 L = Rs. 246 crore/ year.

Note-1: Net Present value (NPV) of environment and ecosystem services loss:

The concept of Net Present value of the forest land diverted is a scientific method of calculating the environmental cost and other losses caused due to diversion of forest land for non-forestry purposes. the NPV represents the net value of various ecosystem services

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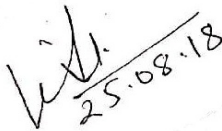
and other environmental services in monetary terms which the forest would have provided if the forest would not have been diverted.

Note-2 Possession value of forest land diverted:

The forest land diverted for the project such as irrigation ,hydropower, railways, roads, wind and transmission lines and mining etc are unlikely to be returned and remaining in possession of the user agencies. Therefore 30 % of the net present value (NPV) of forest land diverted or market rate market rate of adjoining area in the district should be added as a cost component as "possession value of forest land " in addition to the environmental costs due to loss of forests.

Signature

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25.08.18

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