



JHARKHAND URJA SANCHARAN NIGAM LTD.

Transmission Grid Sub-Station, Chatra

Email Id: aeitkhorigss@gmail.com

Letter No 281 /CHATRA- HUNTJ TL/TSD/CHATRA

Date: 24 / 03 /2021

COST BENEFIT ANALYSIS

Cost Benefit Analysis for 132kV D/C HUNTERGANJ – CHATRA Transmission Line of chatra District in Jharkhand state is Estimated as per the Guidelines of Govt. of India with Letter No. 7-69/2011-FC(Pt.) Dated – 01/08/2017 and given below:-

Table – A : Estimation of Cost of Forest Diversion:

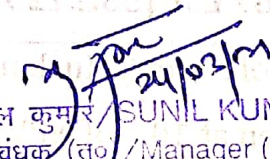
SL.No.	Parameters	Cost (Rs. Lac)
1	Eco system Services Losses Due to Proposed Forest Diversion (Economic Value of Eco system Services Due to Proposed Forest Diversion has been Taken as the "Net Present Value (NPV) of the forest land being Diverted as Prescribed by the Central Government (MoEF & CC) NPV rates taken as 9.39 lacks Per Ha. Under Class II of medium Density Forest Born by the Project Works out to be RS. 499.67 Lac (53.2129 Ha.x 9.39)	499.67
2	Loss of Animal Husbandry productivity (Taken at 10 % of NPV)	49.967
3	Cost of the Human resettlement (resettlement Due to Proposed Forest Diversion)	NIL
4	Loss of Public Facilities and Administrative Infrastructures (Road, Building, School, Dispensaries, Electrical Lines, Railways etc . on Forest land if these Facilities were Diverted Due to Project (No Public Facilities and Administrative Infrastructure are Involve)	NIL
5	Possession of Value of Forest land diverted (Taken at 30% of NPV)	149.901

Division Office : J.U.S.N.L, Transmission Division, 1st Floor, Shringari Complex, Mariam Toli, Canary Hill Road, Hazaribag- 825301

Registered Office: Jharkhand Urja Sancharan Nigam Limited, JUSNL Building, Kusa Colony, Boranda, Ranchi – 834002.

सुनील कुमार / SUNIL KUMAR
प्रबंधक (तट) / Manager (T)
संचरण अपर प्रमण्डल / TSD
झारखण्ड ऊर्जा संचरण निगम / JUSNL
चतरा / Chatra

6	Cost of suffering to ousters (There are no ousters Due to Proposed Forest Diversion)	NIL
7	Habitat Fragmentation Cost (Take at 50% of NPV)	249.835
8	Compensatory Afforestation and Soil & Moisture Conservation Cost (2,50,000- per Ha For 53.2129 Ha.)(Cost For Double Area)	133.032
	Project Cost: -	1646.81
9	Fixed assets, inclusive of investment, Current assets Loans & advances Other Expenditures like preoperative expenses, interests during construction etc.	
	TOTAL: -	2729.215 Lac.


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Table- B: Estimating Benefit of Forest Diversion

SL. NO	Parameter	cost (RS.Lac)
1	<u>Increase in Productivity Attributable to the Specific Project:</u> Power Flow = 140mw(2x70) Load Factor = 60 % Losses = 2.5% Average Value Added = 0.25 per kwh Energy Send out Per Year = 140x1000x0.6x8760x0.975kwh = 71.744x10 ⁷ Value Added = 71.7444x10 ⁷ x 0.25 = 17.936/crore/year = 18 crore/year value Added for 50 Years = 50x18 = 900 crore	90000
2	Benefit to Economy Due to The Specific Project. The Power Will be Transmitted Through This Line to The Power deficit of Huntergunj & Chatra Block of Chatra District. This Project Will provide sustained and Incessant Supply of Power to this Block Which will be Utilized by Large Commercial, Domestic and Agriculture Growth Leading to Increase output Which in turn Will lead to Increase in GDP (Gross Domestic Product) of Jharkhand	9000
3	No of population benefited due to Specific Project. Assuming Average 10 Units Consumption per Day House Hold. Total 1.5 Million House Hold can Be Provided Electricity Per Year	NA

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4	Economic Benefit due to Direct and Indirect Employment Due to the Project During Project Stage, The Project Will Provide Employment 6 nos. of Permanent and 250 Temporary Employments for a period of 18 months (For Permanent Employment Benefit of RS 4.20 lacks/ per Year person and Temporary Employment Rs0.96 Lacks/Year per Person	397.8
5	Economic Benefit Due to Compensatory Afforestation (The NPV of the CA land Considered as Prescribed by the Guidelines 7-69/2011-FC(Pt)dated 01-08-2017 NPV rates taken as Class III medium Density Forest Rs-8.03 lacks/Hs for 53.327Ha	427.299
	TOTAL:-	99825.099

Cost Benefit Ratio:-

i) Table -A Estimation of Cost of Forest Diversion :- 2729.215

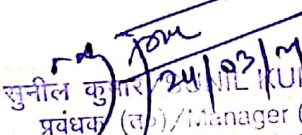
ii)Table -B : Estimating Benefit of Forest Diversion : 99825.099

Cost Benefit Ratio = 2729.215 lakhs/99825.099 lakhs

= 1:36.57

The Cost Benefit Ratio of the Project is Estimated at 1:36.57

Signature :


 सुनील कुमार / SUNIL KUMAR
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Name In Block Letter : SUNIL KUMAR

Designation : Manager

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