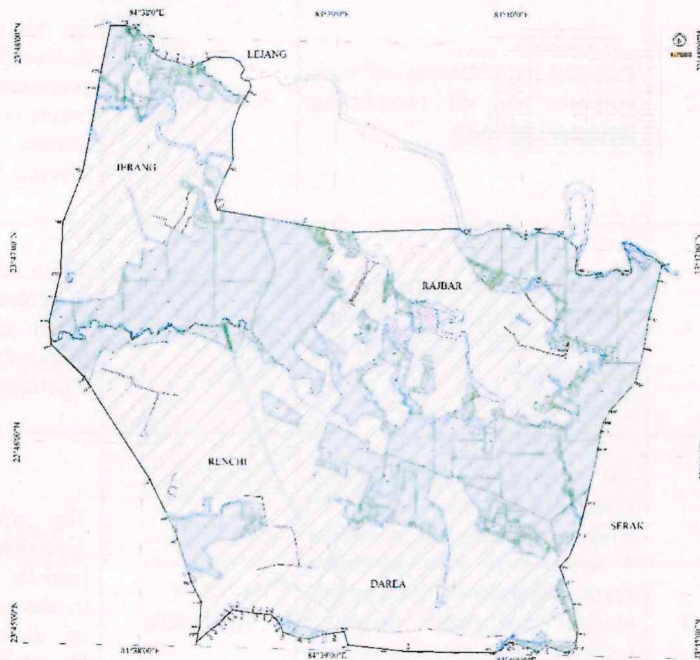




# COST BENEFIT ANALYSIS RAJBAR E&D COAL MINES

*Tenughat Vidyut Nigam Limited*



**Diversion of Forest land over an area of 564.90  
Hectare in villages Rajbar, Darea, Serak,  
Renchi & Jerang District Latehar, Jharkhand for  
Rajbar E&D Coal Mines**

**Allotted to  
Tenughat Vidyut Nigam Limited**

**Prepared by**

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**FEEDBACK INFRA**  
Making Infrastructure Happen

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26 AUG 2025



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**TABLE –A: CASES UNDER WHICH A COST-BENEFIT ANALYSIS FOR FOREST DIVERSION ARE REQUIRED**

S.No.	Nature of proposal	Applicable / Not Applicable	Remark
1	All categories of proposals involving forest land up to 20 hectares in plain and up to 5 hectares in hills	Not applicable	These proposals may be considered on case to case basis and value judgement.
2	Proposal for defense installation purposes and oil prospecting (prospecting only)	Not applicable	In view of national priority accorded to this sector, the proposals would be critically assessed to help ascertain that the utmost minimum forestland 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 proposals would be rarely entertained.
4	All other proposals involving forest land more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation projects, hydro projects, mining activity, railway lines, location specific installation like microwave stations, auto repeater Centre TV tower etc.	Applicable	The proposed project is for diversion of 564.90 ha. of forest land for Rajbar E&D Coal mines in the villages- Lejang& Rajbar of Balumath Anchal, Renchi, Darea&Serak of Chandwa Anchal, Jerang of Latehar Anchal of Latehar District in Jharkhand.





## COST BENEFIT ANALYSIS RAJBAR E&D COAL MINES

**TABLE-B: ESTIMATION OF COST OF FOREST DIVERSION**

S.No.	Parameters	Remarks
1	Ecosystem services losses due to proposed Forest diversion	Economic value of loss of eco-system services due to diversion of forests at proposed villages in Latehar district of Jharkhand shall be Rs. 9,57,780/- Lakh/Ha (NPV rate as per Eco value of Tropical Dry deciduous open forest class III as per Guideline of MoEF&CC, Govt dated 06/01/2022). Total Ecosystem losses is given as below: 1. Total Forest area: 564.90 Ha. 2. Environmental loss: 564.90 x 9,57,780 =Rs.54,10,49,922/- Or Rs.54.10 Crore.
2	Loss of animal husbandry productivity, including loss of fodder	10% of the NPV (as per the cost benefit guidelines) =10% X Rs. 9,57,780/-X 564.90 =Rs. 5,41,04,992/- Or 5.41 Crore.
3	Cost of human resettlement a) cost of land acquisition for resettlement. b) monetary benefits to project displaced families. c) cost of R&R site development.	Rs.350,85,63,520/- Or 350.85 Crore. a) Rs.48,00,00,000/-. b) Rs.107,81,10,000/-. c) Rs.195,04,53,520/-. The draft R&R plan has been submitted to DC, Latehar.
4	Loss of public facilities and administrative infrastructure (roads, building, schools, dispensaries, electric lines, railways etc.) on forest land if these facilities were diverted due to the project	There are no roads and electrical lines passing in the proposed forest area. There is no loss of public facilities in the forest area.
5	Possession value of forest land diverted	(a) 30% of environmental costs (NPV) due to loss of forests or (b) circle rate of adjoining area in the district should be added as a cost component as possession value of forestland whichever is maximum.  As b > a  = Rs.28,19,94,039/- or 28.19 Crore.
6	Cost of suffering to oustees	The social cost of Rehabilitation of oustees (in addition to cost to the cost likely to be incurred in providing residence, occupation and social service as per R&R plan) be worked out as 1.5 times of what oustees should have earned in two years has he not been shifted (minimum wages to be considered)  =425*330*2*1660*1.5 = Rs.69,84,45,000/- Or 69.84 Crore

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7	Habitat Fragmentation Cost	50% of the NPV Cost = <b>Rs.27,05,24,961/- Or 27.05 Crore.</b>
8	Compensatory afforestation and soil & moisture conservation cost	<b>Rs.233,39,53,169/- Or 233.39 Crore</b> a) CA Cost - Rs.128,50,20,669/- b) Soil conservation cost 0.5% project cost - Rs.20,97,86,500/- c) Cost of wild life cost 2% of project cost - Rs.83,91,46,000/-
<b>Estimated Cost of Forest Diversion</b>		<b>Rs.768,86,35,603/- Or 768.86 Crore</b>

**TABLE-C: EXISTING GUIDELINE FOR ESTIMATING BENEFITS OF FOREST DIVERSION**

S.No	Parameters	Remarks
1	Increase in productivity attribute to the specific project	Profit per tonne * Mineable reserves 226.27 Rs./Tonne x 420.22 Million Tonnes <b>Rs.95,08,31,79,400/- Or 9508.31 Crore</b>
2	Benefits to economy due to the specific project	Selling Price : Rs.1671/- per tonne <b>Rs.2,06,96,28,88,376/- Or 20696.28 Crore</b> a) Royalty charges = 14% of selling price (Rs.98,30,62,66,800/-) b) NMET (national Mineral exploration Trust 2% of Royalty (Rs.1,96,61,25,336). c) DMF 30 % of Royalty (Rs.29,49,18,80,040/-) d) Forest Transit Fee - Rs 57/- per tonne (Rs.23,95,25,40,000/-). e) Covid cess -Rs.10/MT (Rs.4,20,22,00,000/-). f) Bazar fees -1% Rs.1671/- (Rs.7,02,18,76,200/-). g) Jharkhand mineral land bearing cess -Rs.100/MT (Rs.42,02,20,00,000/-).
3	No. of population benefited due to the specific project	As per approved Mining Plan benefit to the population: 1. Direct – 1461. 2. Indirect – about 3000.
4	Economic benefits due to direct and indirect employment due to the specific project	Economic benefits due to direct employment = Reserves* salary&wage cost per Tonne  Economic benefits due to indirect employment due to project= 5 times of direct employment*per day wages*no of working days in year*life of the mine <b>Rs.61,98,12,60,000/- Or 6198.12 Crore</b> Direct Employment –Rs.12,80,40,00,000/- Indirect Employment – Rs.49,17,72,60,000/-





## COST BENEFIT ANALYSIS RAJBAR E&D COAL MINES

5	Economic benefits due to compensatory afforestation	(Area of CA Land* ( NPV of moderately dense forest- NPV value of Open forest) 1148.26 X (1228590 - 957780) <b>Rs.31,09,60,291/- Or 31.09 Crore</b>
<b>Estimated Benefits of Forest Diversion</b>		<b>Rs.3,64,33,82,88,066/- Or 36433.82 Crore</b>

Total estimated Cost due to diversion of forest in Rs. Crore	Total Estimated Benefits due to project in Rs. Crore	Cost to Benefit Ratio
768.86 Crore	36433.82	1 : 47.39

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