

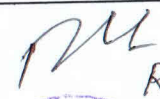


COST BENEFIT ANALYSIS

(A) Parameters for evaluation of loss of forest	a)	Loss of value of timbers, fuel wood & minor forest produce on an annual basis, including loss of man hrs per annum of people who derived livelihood & wages from the forest of these commodities.	
	i)	Loss of value of timbers as per enumeration in 3.42 Ac i.e 1.384 Ha . Of forest area (18.35 units) @ Rs. 1889.00 per unit as per value provided by forest office Angul Forest Div. (20.81 units X Rs. 1889.00 per unit)	34,663.15
	ii)	Firewood approx. 5 MT @ Rs. 2000.0 per MT	10,000.00
	iii)	Minor forest produce (MEF) :-	
		(aa) Mahula trees 27 Nos. with average yieldind capacity of 1.5 quintal per tree @ Rs. 1500.00 per quintal per annum.	60,750.00
		(bb) Char trees 4Nos. @ 5.0 Kgs per tree (total produce is 0.15 quintal) @ Rs. 10000.00 per quintal per annum.	6,000.00
		(cc) Neem trees 03 Nos. @ 1.0 Quintal per tree (total produce is 3.0 quintal) @ Rs. 300.00 per quintal per annum.	900.00
	iv)	Man power requirement approx. 5 man days per year @ Rs. 200.00 per man day	1,000.00
	(b)	Loss of annual husbandary productivity including loss of fodder	
		i) Animal husbandary	0.00
		ii) Fodder in 3.42 Ac i.e 1.384 Ha @ Rs. 2500.00 per AC. Per annum.	3,460.00
	(c)	Cost of human resettlement	0.00
	(d)	Loss of public facilities & admision infrastructure	0.00
	(e)	Environmental loss (loss/erosion) effect on hydrological cycle, wild life habbit, microclimate up setting of ecological balance. As per thumb rule prescribed, environmental loss due to the loss of forest area density 1.0 to accure over a period of 50 years is 126.74 lacs. Hence, loss for average density 0.05 for one year. (Rs. 126.74 lacs. X 3.42 Ac i.e 1.384 Ha X 0.05/ 50)	17,540.82
	(f)	Suffering of ouster -	0.00
	(g)	Average density is 0.05 hence NPV=3.42 Ac i.e 1.384 Ha x 7.5 lacs	10,38,000.00
	(h)	Cost of C A=	10,00,000.00
		Total Loss	21,72,313.97
		i.e. Rs. (Crores)	0.2172


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(B) Parameters for evaluation of benefit not withstanding loss of forest	1	Increase in productivity due to the specific project . Assumptions 1. Power flow 1000 MW 2. Load factor 60% 3. Transmission loss 2.5% 4. Average value added to the economy Rs. 6.0 per KWh 5. Energy sent out per year 1000 x 1000 x 0.6 x 24 x 365 x 0.975 K Wh Value added to the economy per year 5124600000 x Rs. 6.0 (In Crores)	5124600000 3074.76
	2	Benefit to economy :- The agriculture and industry will have tremendous growth with avilability of electricity.	
	3	No. of population benifitted : 3.0 crore	
	4	Employment potential :- Around 60 People will be engaged during construction period and also employment opportunity generated in beneficiary, Agriculture & Industrial sector shall not change.	
	5	Cost of acquisition of facility in non forest land whenever feasible.	0.00
	6	Loss of agriculture & animal husbandary	0.00
	7	Cost of rehabilitation to the displaced persons	0.00
	(c) Summary of cost benefit analysis		
		a) Total loss per annum due to the loss of timber, firewood, MFP, manpower, fodder and environmental loss due to the loss of forest Rs. (Crores)	0.2172
		b) Total benefit to economy due to transmission of electrical power of 5124600000 units per annum by the proposed line @ Rs. 6.0 per unit Rs. (Crores)	3074.76
		c) Hence, the cost benifit ratio of the transmission line project involving diversion of 3.42 Ac i.e 1.384 Ha. of forest land is 0.2172 : 3074.76 = 1 : 14154 C. B. Ratio =	1 : 14154


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