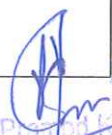


COST BENEFIT ANALYSIS REPORT

A.PARAMETERS FOR EVALUATION OF LOSS OF FORESTS		
SL NO.	PARAMETERS	COST
1.	Loss of value of timber, fuel wood and minor forest produce on an annual basis, including loss of man-hours per annum of people who derived livelihood and wages from the harvest of these commodities:-	
i)	Loss of value of timber as per enumeration is 25.76 Ha of forest area (150.7075 Units @ Rs1889.00 per Unit as per value provided by DFO Sundargarh and DFO Jharsuguda) i.e $150.7075 * Rs1889.00$	2,84,686.47
ii)	Firewood approx. 80MT @Rs2000 per MT	1,60,000.00
iii)	Minor Forest Produce (MFP)	
a)	Mahul tress 129 nos. with average yielding capacity of 1.5 quintals per tree @ Rs1500 per quintal per annum i.e $129 * 1.5 * 1500$	290250.00
b)	Char trees 106 nos.@ 50 kgs per tree (total produce is 53 quintals) @Rs10000 per quintal per annum i.e $53 * 10000$	530000.00
c)	Bahada trees 24 nos.@ 2.0 quintals per tree (total produce is 48 quintals) @ Rs500.00 per quintal per annum i.e $48 * 500$	24000.00
d)	Harida trees 04 nos. @ 2.0 quintals per trees (total produce 8 quintals) @ Rs500.00 per quintals per annum i.e $8 * 500$	4000.00
e)	Neem trees 59 nos. @ 1 quintal per tree (total produce is 59 quintals) @ Rs300.00 per quintal per annum i.e $59 * 300$	17700.00
f)	Mango trees 4 nos. @ 2 quintals per tree (total produce is 8 quintals) @ Rs2500.00 per quintal per annum i.e $8 * 2500$	20000.00
g)	Jamu trees 13 nos. @ 50 kgs per tree (total produce is 6.5 quintals) @Rs 1000.00 per quintal per annum i.e $6.5 * 1000$	6500.00
iv)	Manpower requirement approx. 350 mandays per year @ Rs180 per mandays	63000.00
2.	Loss of animal husbandry productivity, including loss of fodder:-	
i)	There are no major animal husbandry operation existing or proposed in the area under consideration	NIL
ii)	Loss of Fodder in 25.76 Ha @ Rs2500 per Ha per annum	64400.00
3.	Cost of Human resettlement:-	
	There is no human relocation due to this proposal	NIL
4.	Loss of public facilities and administrative infrastructure (roads, buildings, schools, dispensaries, electric lines, railways etc.) on forest land or which would require forest land if these facilities were diverted due to the project:-	


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 इंदिरा गांधी लिमिटेड / IITPC LTD.
 सुंदरगढ़ / Sundargarh

	There is no public facilities and administrative infrastructure (roads, buildings, schools, dispensaries, electric lines, railways etc.) on forest land	NIL
PARAMETERS FOR EVALUATION OF LOSS OF FORESTS		
SL NO.	PARAMETERS	COST
5.	Environmental losses: (soil erosion, effect on hydrological cycle, wildlife habitat, microclimate upsetting of ecological balance):-	
	As a thumb rule the environmental value of one hectare of fully stocked (density 1.0) would be taken as Rs126.74 lakhs to accrue over a period of 50 years. Average Density of forest area to be diverted=0.4 Value per hectare=Rs50.70 lakhs over a period of 50 years. Value of 25.76Ha= Rs50.70 lakhs * 25.76 Ha= Rs1306.032 lakhs for 50 years period. Thus environmental loss per year=Rs1306.032/50= Rs26.12064 lakhs	2612064.00
6.	Suffering to oustees:-	NIL
7.	Net Present Value:-	
	Tentative NPV= 25.76*7.5lacs=19320000.00	19320000.00
8.	Cost of C.A:-	
	Tentative cost of C.A=25.76*84000=2163840.00	2163840.00
TOTAL COST		25560440.47

B.PARAMETERS FOR EVALUATION OF BENEFIT, NOTWITHSTANDING LOSS OF FORESTS		
SL NO.	PARAMETERS	BENEFIT
1.	Increase in productivity attributable to the specific project:-	
	Installed capacity of Darlipali STPP is 1600 MW Assume Plant load factor (PLF) as 95%. Transmission Loss= 2.5% Considering annual operation of 7446 hours. Average value added to the economy=Rs3.01 per kWh Energy sent out per year= 1600*1000*0.95*7446*0.975= 11034972000 kWh. Value added to the economy per year=11034972000 kWh*3.01=33215265720 i.e. 3321.526 crores.	3321.526crores

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 इन्दौर / NTPC LTD.
 सुन्दरगढ़ / Sundargarh

2.	Benefits to economy:-	
	Better power available for industrial, commercial and domestic use. The industry and agriculture will have tremendous growth with availability of electricity.	
3.	No. of population benefitted:-	2 crores
4.	Employment potential:-	
	Approximately 300-400 people in various capacities will be employed during construction of this project including engineers, technician and supporting field staff. Beside a large no people running mechanical Workshops, spare parts dealers etc. will gain business because of construction of this corridor.	
5.	Cost of acquisition of facility on non-forest land wherever feasible:-	NIL
6.	Loss of (a) agriculture & (b) animal husbandry production due to diversion of forest land:-	
	No such agricultural or animal husbandry operations are being undertaken in the land coming in route of our proposed project.	NIL
7.	Cost of rehabilitating the displaced persons as different from compensatory amounts given for displacement:-	
	There is no displaced person in the forest area.	NIL
8.	Cost of supply of free fuel-wood to workers residing in or near forest area during the period of construction:-	NIL

Hence the cost benefit ratio of the MUW Pipeline and 132KV Transmission Line Corridor project involving 25.76 Ha of forest land is 2.556044047/3321.526 i.e. **1:1300**.

NB: CB ratio furnished is tentative. Actual CB ratio shall be submitted on finalisation of C. A. Scheme and NPV.

Signature of User Agency

प्रमोद कुमार / Official seal / Kumar
महा प्रबंधक (प्रभारी) / General Manager (I/C)
इंदरपाली सुपर फाईल फवरा प्रोजेक्ट / Darlipali STPP
एनटीपीसी लिमिटेड / NTPC LTD.
सुन्दरगढ़ / Sundergarh