

COST BENEFIT ANALYSIS

Project Name: Construction of LILO of 220 KV Udhampur-Gladni Transmission line at Nagrota GSS (New)

File No: FP/JK/TRANS/152211/2022

Date of Proposal: 10/02/2022

Purpose: This cost benefit analysis is being undertaken for proposed diversion of Forest Land (11.25 ha.) being affected due to Proposed Construction of LILO of 220 KV Udhampur-Gladni Transmission line at Nagrota GSS (New) the Union Territory of Jammu & Kashmir.

Table A: Cases under which cost benefit analysis for Forest diversion Required

S. No.	Nature of Proposal	Applicable / Not Applicable	Remarks
1	All categories of proposals involving forest land up to 20 hectares in plains up to 5 hectare in hills.	Not Applicable	
2	Proposal for defense installation purposes and oil prospecting (prospecting only).	Not Applicable	
3	Habitation, establishment of industrial units, tourist lodges complex and other building Construction.	Not Applicable	
4	All other proposals involving forestland more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation project, hydro project mining activity, railway lines, location specific installation like micro wave station, auto repeater centers, TV tower etc.	Applicable	The project is construction of transmission line


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Table B: Estimation of cost of forest diversion
(as per MOEF & CC Guidelines dated 1st August 2017)

S. NO	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion.	NPV of the forest land which is being diverted i.e. Forest Land = 11.2525 ha. X 12.92850 lac = Rs. 145.44795 Lac Total cost = Rs. 145.45 Lac
2	Loss of animal husbandry NIL productivity including loss of fodder	Productivity of livestock will not be affected due to construction of this transmission line 10% of NPV applicable = Rs 14.54479 lac i.e 14.55 Lac.
3	Cost of human resettlement.	Nil , Since there is no displacement of people due to this Project there would be no cost of human resettlement.
4	Loss of public facilities and administrative infrastructure (Road, building, dispensaries, electric lines, railways, etc.) on forest land which would require forest land if these facilities were diverted due to the project.	Not applicable , since these facilities are not available inside the forest area for the proposed diversion. The route /corridor is not affecting any public facilities on the diverted forest land.
5	Possession value of forest land diverted.	30% of Environment Cost (NPV) =43.63439 lac i.e Rs 43.64 lac is considered as per guidelines.
6	Cost of suffering to outees.	Not applicable, since there is no displacement of people
7	Habitat Fragmentation cost.	50% of NPV applicable as thumb rule i.e 72.73 Lac
8	Compensatory afforestation and soil & moisture conservation cost.	Compensatory Afforestation cost 2 x 11.2525 hac x 5.25 lac /hac = Rs 118.15125 Lac say 118.15 Lac Soil and moisture conservation cost included in Compensatory Afforestation cost.
	Total loss (Against the proposed forest land diversion).	Rs.: 394.52 Lacs say 395 lacs


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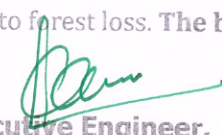
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Table C: Estimation of Benefit of forest diversion in Cost Benefit Analysis
(as per MOEF & CC Guidelines dated 1st August 2017)

S. No.	Parameters	Descriptions
1	Increase in productively attribute to the specific project.	There shall be increase of Capacity of power distribution in Nagrota area by 100MVA. Assuming power factor of 0.8, load factor 70%, availability 98% power transfer capability shall be 54.88 MW. Therefore the project enable additional supply of 480748800 KWH /year to Nagrota and adjoining areas. Over the period of 50 years the project shall transfer power of 240374 Lac Units of power. Assuming unit rate of power Rs 2.70 total value of additional power transferred shall be 649010 lacs adding equivalent value of productivity.
2	Benefits to economy due to the specific project.	As stated in SI. I above , construction of new sub-station shall facilitate economic growth of the area by supplying additional power in area which shall facilitate small/medium size industries /shops etc and most importantly shall supply power to two premiere institutes of India (IIT Jammu and IIM Jammu). Benefits of economy may be considered to be same and included in productivity increase.
3	No. of population benefited due to specific project.	Construction of new substation shall enable supply of power to 50000 additional households (considering 2 KW each Household) residing in Nagrota and adjoining areas.
4	Economic benefits due to of direct and indirect employment due to the project.	During the development stage employment will be generated for skilled and unskilled manpower for a period of 24 months. Man-days- 4600 (Approx) Rs. 400/- Per Man-day Total Amount= 18.40 Lac Direct/Indirect Employment generated during operational life of 50 years for 20 Man-days per Day Man-days- 3,65,000 Rs. 700/- Per Man-day Total Amount=2555 lac
5	Economic benefits due to Compensatory afforestation.	Compensatory Afforestation for 11.2525 ha. of degraded forest land @ 5.25 lac/ha. for 50 Years Rs. 59.07 Lac.
	Total	651642.47 Lac say 651643 Lacs

Cost Benefit Ration i.e. Project Benefit/Forest loss = 651643 /395=1649.72:1 say 1650 : 1

Hence the project has very high benefit to the country as compared to forest loss. **The benefit to loss ratio is approximately 1650 times.**


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