

# HIMACHAL INFRACON PRIVATE LIMITED

Corp. Off: Plot No.226, Road No.78, Phase - III, Jubilee Hills, Hyderabad – 500 096, Telangana.

Tel. No. 040-23540531, e-mail: himachalinfracon@gmail.com

CIN: U70102HP2010PTC031373

Cost Benefit Analysis for the land proposed for diversion (12.58 Ha)

Land is required for development of the proposed Integrated Corridor (For Laying of Transmission Line, Pipe Network and Road). The total required land for the proposed project is 25.34 Ha Out of total land involved in the project, 12.58 Ha of forest land is to be diverted for non-forest purposes from Ghani Reserve Forest under Kurnool Division, Andhra Pradesh. As per the FCA guidelines, Cost Benefit Analysis has to be prepared for project feasibility and calculation of the same is furnished below.

## Details of calculation of Cost - Benefit analysis:

S.No	Description	Details
1	Project	Integrated Corridor (For Laying of Transmission Line, Pipe Network and Road)
2	Forest Land required (Ha)	12.58
3	Average site Quality of Forest	Mixed Forest

## BREAK UP OF FOREST LAND REQUIRED FOR THE PROJECT

Sl. No.	compartment Numbers	Forest Land Area (Ha)
1	93	3.03
2	94	1.86
3	106	2.59
4	111	0.15
5	112	3.13
	113	0.06
6	114	1.76
	<b>TOTAL</b>	<b>12.58</b>



*G. Suresh*

# HIMACHAL INFRACON PRIVATE LIMITED

Corp. Off: Plot No.226, Road No.78, Phase - III, Jubilee Hills, Hyderabad – 500 096, Telangana.

Tel. No. 040-23540531, e-mail: himachalinfracon@gmail.com

CIN: U70102HP2010PTC031373

**Table-A: Category of proposals for which Cost Benefit Analysis are applicable**

Sr. No.	Nature of Proposal	Applicable / Not applicable	Remarks
01	All categories of proposals involving forest land up to 20 hectares in plains and up to 5 hectares in hills	Applicable	These are cases where a Cost benefit analysis is necessary to determine when diverting the forest land to non-forest use is in the overall public interest.
02	Proposal for defence installation purposes and oil prospecting (prospecting only)	Not Applicable	NIL
03	Habitation, establishment of industrial units, tourist lodges / complex and other building constructions.	Not Applicable	NIL
04	All other proposals involving forest land more than 20 Ha in plain and more than 5 ha in hills including roads, transmission lines, minor medium and major irrigation projects, hydel projects, mining activities, Railway lines, location specific installation like Micro-wave station, auto repeater center, TV towers, etc.	Not Applicable	NIL

**Table B: Estimation of Cost of Forest Diversion:**

SNo	Parameters	Cost in Rs. Lakhs	Remarks
1	Ecosystem services losses due to proposed forest diversion.	120.52	Economic value of loss of ecosystem services due to diversion of forests shall be the net present value (NPV) of the forest land being diverted (12.58 Ha) as prescribed by the Central Government (MoEF & CC). * NPV is considered as 9.58 L/Ha



*G. Suresh*

# HIMACHAL INFRACON PRIVATE LIMITED

Corp. Off: Plot No.226, Road No.78, Phase - III, Jubilee Hills, Hyderabad – 500 096, Telangana.

Tel. No. 040-23540531, e-mail: himachalinfracon@gmail.com

CIN: U70102HP2010PTC031373

2	Loss of animal husbandry productivity including loss of fodder.	12.05	Maximum of: (a) Estimated Quantity of fodder / grasses in M.T = Average production fodder per grasses in M.T per Ha x Area Applied diversion. based on the assumption that on closer an area can yield an average 2 to 4 MT of grass per ha. i.e $3 \times 12.58 = 37.74$ MT. (Average fodder is 3 MT/Ha is considered) (b) Value or loss of fodder (Rs) = Estimated quantity x Market price = $37.74 \text{ MT} \times \text{Rs.}5000/\text{MT} = \text{Rs.}1.887$ Lakhs) 2. Considered 10% NPV <b>which is maximum</b> : Rs 120.52 Lakhs x 0.1 (10%) = Rs. 12.05 Lakhs
3	Cost of human resettlement.	Nil	
4	Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways etc) on forest land, which would require forest land if these facilities were diverted due to the project.		
5	Possession value of forest land diverted.	37.30	i. 30% of environmental costs (NPV) due to loss of forests ( $120.52 \times 0.30 = \text{Rs } 36.15$ lakhs) ii. Circle rate of adjoining area is Rs. 37.30 Lakhs, which is maximum, compared to 30% of NPV. Hence Rs 36.80 Lakhs is considered as possession value of forest land diverted.



*G. Srinivas*

# HIMACHAL INFRACON PRIVATE LIMITED

Corp. Off: Plot No.226, Road No.78, Phase - III, Jubilee Hills, Hyderabad – 500 096, Telangana.

Tel. No. 040-23540531, e-mail: himachalinfracon@gmail.com

CIN: U70102HP2010PTC031373

6	Cost of suffering to Oustees.	Nil	Not applicable, there is no Displacement of people.
7	Habitat Fragmentation Cost.	60.26	The cost due to fragmentation has been pegged at 50% of NPV applicable as thumb rule...i.e.. $120.52 \times 0.50 = \text{Rs. } 60.26 \text{ Lakhs}$
8	Compensatory afforestation and soil & moisture conservation cost.	318.75	Total area for compensatory afforestation (12.75 Ha) @ 10 L/Ha = 127.5L Cost of Land (Non-Forest Land) = 12.75 ha @15.00/ha = 191.25 Lakhs
	<b>Total</b>	<b>548.88</b>	

**Table C: Estimation of Benefits of Forest Diversion:**

SNo	Parameters	Remarks	Benefits (in lakhs)
01	Increase in productivity attribute to the proposed project	The Integrated corridor will help to develop the proposed 1200 MW Integrated Storage Project which would help in generation of green energy by replacing fossil fuel requirement and also contribute to much needed peak power generation.	
02	Benefits to economy due to the Project	Power/energy is one of the prime requirements for the overall development of a State and Nation. Since, IREP power is the cleanest, cheapest and environmentally friendly source of energy; This project will facilitate development of IREP and in turn helps in the emergence of industries, trade and commerce and would thereby bring more and more economic development in the State & Country.	
03	No. of population Benefited due to the Project	Direct Employment during Construction-60, Operation-20 The completion of project will directly and indirectly benefit the population residing in Kurnool District as well as State and the Country.	



*G. Suresh*

# HIMACHAL INFRACON PRIVATE LIMITED

Corp. Off: Plot No.226, Road No.78, Phase - III, Jubilee Hills, Hyderabad – 500 096, Telangana.

Tel. No. 040-23540531, e-mail: himachalinfracon@gmail.com

CIN: U70102HP2010PTC031373

04	Economic benefits due to direct & indirect employment due to the Project	<p>During the construction phase, employment will be generated for skilled and unskilled manpower. About 60 persons will be employed during the peak time of construction. The local people will also get the opportunity to carry out contract works subject to their work capability / expertise. After completion of the Project, during operation of the project about 20 people will be employed for routine operation and maintenance of roads and other structures.</p> <p><b>Construction Phase:</b> Temporary labor engagement (App 40 nos per day) during execution along with various Firms/supplier/ manufactures will be engaged for 1 year{average 300days/year). Labour Charge 500 per day <math>40 \times 300 \times 500 = 60</math> Lakhs Permanent Employees 20No Per day for 1 year{average 300days/year). Labour Charge avg 2000 per day <math>20 \times 300 \times 1500 = 90</math> Lakhs.</p> <p><b>Operation Phase:</b> Permanent Employees 20No Per day for year{average 300days/year). Labor Charge avg 2000 per day for 40 years <math>40 \times 20 \times 300 \times 1500 = 3600</math> Lakhs.</p>	3750
05	Economic benefits due to Compensatory Afforestation	Benefits from Compensatory Afforestation (CA) accruing over next 50 years and discounted to Present Value.	
		<b>Total Benefits</b>	<b>3750</b>

\* Cost of the Economic benefits due to direct & indirect employment is not considered

## Table D. Calculation of Cost Benefit Ratio:

Total Benefits (As per Table C: Estimation of benefits of Forest Diversion) = Rs. 3750 Lakhs

Total Cost (As per Table B: losses of forests) = Rs. 548.88 Lakhs

**Hence, Benefit/ Cost Ratio = 6.83**

***Thus, the project gives positive Benefit/ Cost Ratio. The monetary returns of the Project are positive over the environmental losses.***



*G. Suresh*