

**Full Title of the Project:** Diversion of 0.5457 ha. of forest land in favour of Executive Engineer, Transmission System Division, HVPNL Hisar for creation of 132 KV S/C Line with 0.4 Sq. Zebra conductor from 132 K.V S/Stn. Bhojraj to 132 KV S/S Arya Nagar & LILO of One Line Circuit of 132 KV D/C Sangwan to Khanak Line at 132 KV S/Stn. Bhojraj Line on 132 KV D/C KRR Design Towers under forest- Division & Distt. Hisar Haryana.

FP/HR/TRANS/50181/2021

Date of Proposal: 29/09/2020

**CHECK LIST SERIAL NUMBER:- 18**  
**"SCHEME FOR COMPENSATORY AFFORESTATION"**

Name of the Forest/Reach to be diverted			Full Title of the Project: Diversion of 0.5457 ha. of forest land in favour of Executive Engineer, Transmission System Division, HVPNL Hisar for creation of 132 KV S/C Line with 0.4 Sq. Zebra conductor from 132 K.V S/Stn. Bhojraj to 132 KV S/S Arya Nagar & LILO of One Line Circuit of 132 KV D/C Sangwan to Khanak Line at 132 KV S/Stn. Bhojraj Line on 132 KV D/C KRR Design Towers under forest- Division & Distt. Hisar Haryana.		
Forest Area (in Ha)			0.5322		
Details of de-graded forest land/non forest land where CA is to be carried out :			CA site:- Siwani Minor RD 184-211 L/Side,		
Division / District	Hisar	Range	Hisar, Hansi Adampur	Village.	Bhojraj
2).	<b>Description of Area :</b>				
i	Whether the site selected for Compensatory Afforestation is a land bank or not				Yes
ii	If the C.A site is other than the land bank, reasons be given				N.A
iii	In case of non-forest area identified for CA, then what is the distance of CA site from adjoining forest boundary				N.A
iv	Soil Type			Sandy Loam	
v	Topography :	a. Hilly/Undulating/Plain.			Undulating
		b. Slope:-Steep/Medium/Gentle.			
vi	Whether the area is bearing any root stock of vegetation				No

**3 Plantation of Model:-**

Copy of the approved Compensatory Afforestation Scheme/Model showing component wise physical and financial break up is as under :-

Detail of year wise breakup of requirement of funds is as under :-

The plantation cost is calculated for tall plants norms at Plant to Plant spacing and it is approved by the PCCF, Haryana's letter no. CAMPA/232 dated 11-06-2021 at a spacing of 4 x 4 on the wage rate of Rs. 363.77/- per day as under :-

Year	Plant per Year
1 <sup>st</sup> Year cost of afforestation	315.33
2 <sup>nd</sup> Year maintenance	86.90
3 <sup>rd</sup> Year maintenance	54.09
4 <sup>th</sup> Year maintenance	10.05
5 <sup>th</sup> Year maintenance	10.05
6 <sup>th</sup> Year maintenance	10.05
7 <sup>th</sup> Year maintenance	10.05
8 <sup>th</sup> Year maintenance	10.05
9 <sup>th</sup> Year maintenance	10.05
10 <sup>th</sup> Year maintenance	10.05
<b>Total</b>	<b>526.67</b>

Area to be Diverted =	0.5322
No. of trees to be felled-	149
Plants to be damaged=	293
Plants to be planted =	2076
Area to be Planted (@ 1000 plant per ha.) =	2.08
Additional C.A. in lieu of plants to be damaged (Double the plants to be damaged)= 586	

S.No	DESCRIPTION		RATE Rs Per Plant	TOTAL AMOUNT (Rs.)
A	Compensatory Afforestation Charges	No. of Plants		
	(1) 1 <sup>st</sup> Year cost of afforestation	1490	315.33	469842
	(2) 2 <sup>nd</sup> Year maintenance		86.90	129481
	(3) 3 <sup>rd</sup> Year maintenance		54.09	80594
	(4) 4 <sup>th</sup> Year maintenance		10.05	14975
	(5) 5 <sup>th</sup> Year maintenance		10.05	14975
	(6) 6 <sup>th</sup> Year maintenance		10.05	14975
	(7) 7 <sup>th</sup> Year maintenance		10.05	14975
	(8) 8 <sup>th</sup> Year maintenance		10.05	14975
	(9) 9 <sup>th</sup> Year maintenance		10.05	14975
	(10) 10 <sup>th</sup> Year maintenance		10.05	14975
	(11) Barbed Wire Fencing charges= RKM	5.96	Rs. 200000/- Per RKM	1192000
	Total Charges			1976742
B	Additional Compensatory Afforestation Charges			
	(1) 1 <sup>st</sup> Year cost of afforestation	586	315.33	184783.38
	(2) 2 <sup>nd</sup> Year maintenance		86.90	50923.40
	(3) 3 <sup>rd</sup> Year maintenance		54.09	31696.74
	(4) 4 <sup>th</sup> Year maintenance		10.05	5889.30
	(5) 5 <sup>th</sup> Year maintenance		10.05	5889.30
	(6) 6 <sup>th</sup> Year maintenance		10.05	5889.30
	(7) 7 <sup>th</sup> Year maintenance		10.05	5889.30
	(8) 8 <sup>th</sup> Year maintenance		10.05	5889.30
	(9) 9 <sup>th</sup> Year maintenance		10.05	5889.30
	(10) 10 <sup>th</sup> Year maintenance		10.05	5889.30
	(11) Barbed Wire Fencing charges= RKM	2.34	Rs. 200000/- Per RKM	468800
	Total (B) Addl. C.A. Charges			777429
	Total (A+B) (CA+ACA)			2754171
	Supervisory / Overhead / Miscellaneous Charges		10% on the CA charges	275417
	G. Total (CA+ACA+10% Supervisory Charges)			3029588
C	Catchment Area Treatment (if required)			
	Soil and Moisture Conservation charges		30% of the Total CA	908876
D	Safety Zone (if required)			
	Additional Charges (if required)	Qty	Rate	
	Gypsum Application + Green manuring to reclaim soil + Casualty replacement + construction of sub surface drainage as per need	2.08 ha treatment	60000 (AS per guideline of Min of Agri (GOI))	1,24,800
	Survey & Demarcation with DGPS		200000/-	2,00,000
	Honda siel WV 30 D Diesel Pump	2	45000	90000



	Plantation protection sign board and Display Forest Department Management and Awareness	LS	200000	200000
	Chain Saw MS-382 for forest harvesting	2	32204	64408
			<b>Total</b>	<b>6,79,208</b>
F	Net Present Value of Forest Land to be diverted	0.5322 Ha.	Rs. 1228590/- ha.	653856
G	Penel C.A (NPV X 5 X 12% Simple Intrest)			108424
H	Felling charges = Vol m <sup>3</sup>	87.91	Rs. 1200/- Per m3	105492
			<b>Total</b>	<b>5485444</b>
I	Exigency Charges 3% of the total cost of Total CA Scheme			164563
			<b>G.Total</b>	<b>5650007</b>
3	<b>Technical Details :-</b>			
-	Technical Details of Compensatory Afforestation Scheme are as follows :-			
a	General Details			Plantation will be done with 3 standard Barbed fencing in RF/PF.
b	Spacement.			Plant to Plant (4X4)
c	Species.			Neem, Bakain, Shisham, Siris, Jamun, Papri, Arjun, Lassora, Tut, Imli, Awla etc.
d	Plantation Method.			Tall Plantation
e	Soil and Moisture Conservation Works.			
f	Protection (Fencing, watchman, Peoples Participation etc).			Fencing
g	Proposed Monitoring Mechanisim.			M&E
h	Any Other Information			No

Place: Hisar  
Dated : 18-01-2022

Divisional Forest Officer  
Hisar  
Hisar Forest Division  
HISAR

Note : CF (T) should countersign this C.A. scheme if area to be afforested is more than 5 hectare.

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**FP/HR/TRANS/50181/2021**

**Date of Proposal: 29/09/2020**

## **NPV Calculation Sheet**

Net Present Value to be realized in lieu of diversion of 0.5322 Ha. of forest land for Diversion of 0.5457 ha. of forest land in favour of Executive Engineer, Transmission System Division, HVPNL Hisar for creation of 132 KV S/C Line with 0.4 Sq. Zebra conductor from 132 K.V S/Stn. Bhojraj to 132 KV S/S Arya Nagar & LILO of One Line Circuit of 132 KV D/C Sangwan to Khanak Line at 132 KV S/Stn. Bhojraj Line on 132 KV D/C KRR Design Towers under forest- Division & Distt. Hisar Haryana. have been fixed based on the outcome scientific accessment of ecosystem goods and services.

In this case NPV is calculated as per **Eco Class III (Dense)** @ 1228590/- per ha. Fitment factor of 1.53 i.e @

**Diverted Land  $0.5322 \times 1228590 = 653856$**

**Divisional Forest Officer**  
**Hisar Forest Division**  
Hisar **HISAR**

18/11/22  
18-11-22



**Cost Statement of Plantation of Tall Plants under Compensatory Afforestation during the year  
2021-22 at a wage rate of Rs. 363.77/- per day**

No. of Plants = 1000, spacing = 4m x 4m, physical area per 1000 plants = 1.6 Ha.

Sr. No.	Item of Work	Unit	Qty.	Rate / Unit	Amount (Rs.)
<b>1st year Plantation (2021-22)</b>					
1	Jungle clearance	Ha	1.6	5456.55	8730.48
2	Raising of plants in nursery (30cmx45cm) : 1000+20% extra	Nos	1200	92.49	110988.00
3	Dag bailing and alignment	RKM	3	254.63	840.28
4	Digging of pits 1000x0.6mx0.6mx0.6m	M <sup>3</sup>	216	154.60	33393.60
5	Loading and unloading of plants in tractor/cart	Nos	1100	2.74	3014.00
6	Carriage of plants by Tractor/ Trolley	Nos	1100	22.85	25135.00
7	Carriage of plants from pit to pit	Nos	L/s		2500.00
8	Planting of Plants including 10% replacement	Nos	1100	14.56	16016.00
9	Application of fertilizer (one time DAP+One time urea)	Nos	2000	0.72	1440.00
10	Irrigation five times	Nos	5000	5.47	27350.00
11	First weeding and hoeing	Nos	1000	7.26	7260.00
12	Subsequent weeding and hoeing two times	Nos	2000	5.47	10940.00
13	New long fencing	Mtr.	100	16.12	1612.00
14	Chhapa binding around plants	No.	1000	16.14	16140.00
15	Miscellaneous expenditure	LS			2000.00
16	Cost of wages of protection watcher (one protection watcher for six months for plantation area of 10 Ha.)	LS			6547.00
	<b>Sub-Total</b>				<b>273906.36</b>
	<b>Added EPF @ 13%</b>				
	<b>Added ESI @ 3.25%</b>				
	<b>of wages component 50% of total</b>				<b>22254.89</b>
	<b>Added Contractor profit @ 7% of total</b>				<b>19173.45</b>
	<b>Total</b>				<b>315334.70</b>

**2nd year maintenance**

1	Jungle clearance	Ha.	0.5	5456.55	2728.28
2	Raising of plants in nursery	No.	240	92.49	22197.60
3	Re-opening of pits 200x (0.6cmx0.6cmx0.6cm)	M <sup>3</sup>	43.2	72.75	3142.80
4	Loading & unloading of plants	No.	220	2.73	600.60
5	Carriage of plants	No.	220	22.85	5027.00
6	Carriage of plants Pit to Pit	No.	L/s		1000.00
7	Planting of plants	No.	220	14.56	3203.20
8	Irrigation three times	No.	3000	5.47	16410.00
9	Chhapa binding around plants	No.	500	16.14	8070.00
10	Weeding and hoeing once	No.	1000	5.47	5470.00
11	Miscellaneous expenditure	LS			1086.00
12	Cost of wages of protection watcher				6547.00
	<b>Sub-Total</b>				<b>75482.48</b>
	<b>Added EPF @ 13%</b>				
	<b>Added ESI @ 3.25%</b>				
	<b>of wages component 50% of total</b>				<b>6132.95</b>
	<b>Added Contractor profit @ 7% of total</b>				<b>5283.77</b>
	<b>Total</b>				<b>86899.20</b>

**3rd Year Maintenance (2019-20)**

1	Jungle clearance	Ha.	0.5	5456.55	2728.28
2	Raising of Plants in nursery	No.	120	92.49	11098.80
3	Re-opening of pits 100x0.6mx0.6mx0.6m	M <sup>3</sup>	21.6	72.75	1571.40
4	Loading and unloading of plants	No.	110	2.73	300.30
5	Carriage of plants	No.	110	22.85	2513.50
6	Carriage of plants Pit to Pit	No.	L/s		500.00
7	Planting of plants	No.	100	14.56	1456.00
8	Irrigation two times	No.	2000	4.56	9120.00
9	Chhapa binding around plants	No.	300	16.14	4842.00
10	Weeding and hoeing once	No.	1000	5.47	5470.00
11	Miscellaneous expenditure	LS			840.00
12	Cost of wages of protection watcher				6547.00
	<b>Sub-Total</b>				<b>46987.28</b>
	<b>Added EPF @ 13%</b>				
	<b>Added ESI @ 3.25%</b>				
	<b>of wages component 50% of total</b>				<b>3817.72</b>
	<b>Added Contractor profit @ 7% of total</b>				<b>3289.11</b>
	<b>Total</b>				<b>54094.</b>

1076/21



**4th Year Maintenance (2018-19)**

1	Jungle Clearance				
2	Cleaning, pruning and spacing	Ha.	0.5	1713.42	856.71
3	Miscellaneous Expenditure	LS		0.00	3526.00
	<b>Sub-Total</b>				4343.00
	Added EPF @ 13%				8725.71
	Added ESI @ 3.25%				
	of wages component 50% of total				
	Added Contractor profit @ 7% of total				708.96
	<b>Total</b>				610.80
	<b>5th Year Maintenance (2017-18)</b>				10045.47

1	Harrowing in plantation				
2	Cleaning, pruning and spacing	Ha.	0.5	1713.42	856.71
3	Miscellaneous Expenditure	LS		0.00	3526.00
	<b>Sub-Total</b>				4343.00
	Added EPF @ 13%				8725.71
	Added ESI @ 3.25%				
	of wages component 50% of total				
	Added Contractor profit @ 7% of total				708.96
	<b>Total</b>				610.80
	<b>6th Year Maintenance (2016-17)</b>				10045.47

1	Harrowing in plantation				
2	Cleaning, pruning and spacing	Ha.	0.5	1713.42	856.71
3	Miscellaneous Expenditure	LS		0.00	3526.00
	<b>Sub-Total</b>				4343.00
	Added EPF @ 13%				8725.71
	Added ESI @ 3.25%				
	of wages component 50% of total				
	Added Contractor profit @ 7% of total				708.96
	<b>Total</b>				610.80
	<b>ABSTRACT OF COST NORMS</b>				10045.47

YEAR OF PLANTATION	Cost (in Rs.)	Cost per plant
FIRST YEAR PLANTATION		
SECOND YEAR MAINTENANCE	315334.70	315.33
THIRD YEAR MAINTENANCE	86899.20	86.90
FOURTH YEAR MAINTENANCE	54094.10	54.09
FIFTH YEAR MAINTENANCE	10045.47	10.05
SIXTH YEAR MAINTENANCE	10045.47	10.05
<b>TOTAL</b>	486464.42	486.46

VATamur-10.6.2021  
Principal Chief Conservator of Forests  
Haryana, Panchkula