

**Full Title of the Projects:-** Diversion of 1.78 Ha of forest land Laying Gas Pipeline in favour of Torrent Gas Pvt Ltd along various strips (as per Annexure-A) of Forest Range Patiala and Nabha under Forest division Patiala.

**Proposal No. :** FP/PB/Pipeline/147089/2021

**CHECK LIST SERIAL NUMBER:-17**

**"SCHEME FOR PENAL COMPENSATORY AFFORESTATION"**

Detail scheme Penal Compensatory Afforestation Estimate for diversion of 1.78 Ha of forest land Laying Gas Pipeline in favour of Torrent Gas Pvt Ltd along various strips (as per Annexure-A) of Forest Range Patiala and Nabha under Forest division Patiala.

Details of degraded forest land:- BML RD 370-376 B/s

District Patiala Village : BML RD 370-376 B/s Tehsil: Samana

Name of Forest Division: Patiala

Forest Range: Samana

Block No./Compartment No./Survey No BML RD 370-376 B/s

Area:- 0.0157 Ha.

Area to be afforested:- 0.0157 Ha. Plantation will be planted BML RD 370-376 B/s

**2. Description of Area:-**

- i. Whether the site selected for Compensatory Afforestation is a land bank or not:-  
\_\_\_\_\_ Yes
- ii. If the CA site is other than the land bank, reasons be given:-Land bank.
- iii. In case of non-forest area identified for CA, then what is the distance of CA site from the adjoining forest boundary:- N.A.
- iv. Soil type:-Heavy
- v. Topography:- a. Plain  
b. Slope:-Gentle
- vi. Whether the area is bearing any root stock of vegetation: Scattered .

**3. Plantation Model:-**

Copy of the approved Compensatory Afforestation Scheme/Model showing component wise physical and financial break up to be enclosed.

**4. Schedule of Plantation Programme:-**

Detail of year wise break-up of requirements of funds is as under:

  
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0 <sup>th</sup> year	0.0157	210155.8	3299.45
1 <sup>st</sup> Year	0.0157	84482.2	1326.37
2nd Year	0.0157	52645.8	826.54
3 <sup>rd</sup> Year	0.0157	59044.4	927.00
4 <sup>th</sup> Year	0.0157	57376	900.80
5 <sup>th</sup> Year	0.0157	6698.5	105.17
6th Year	0.0157	6698.5	105.17
7th Year	0.0157	6698.5	105.17
8th Year	0.0157	6698.5	105.17
9th Year	0.0157	6698.5	105.17
10th Year	0.0157	6698.5	105.17
Supervision Charge	0.0157	75583.8	1186.67
		<b>579479</b>	<b>9098</b>


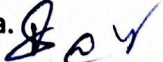
5. **Technical Details:-**

Technical details of Penal Compensatory Afforestation Scheme are as follows:-

- General Details :-
- Spacing :- 3 x 3 mtr.
- Species :- Shisham, Arjun , Drek etc..
- plantation Method :-Pit & Trenches
- Soil and Moisture Conservation Works :-
- Protection (Fencing, Watch man , People's Participation etc.):Fencing,  
Watch Man
- Proposed Monitoring Mechanism :-Internal
- Any other information :-

Place:Patiala

Date:

  
VidhyaSagari R.U. ,IFS  
Divisional Forest Officer,  
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				<b>Wage Rate :</b>	<b>Rs. 368.05</b>
<b>Plantation Model For Standard Plantation under Compensatory Afforestation</b>					
	<b>Plants Per Hectare : 1000 Nos.</b>				
<b>Sr. No.</b>	<b>Name of Work</b>	<b>Unit</b>	<b>Qty.</b>	<b>Unit Cost (in Rs.)</b>	<b>Amount</b>
	<b>Nursery</b>				
	Nursery cost of raising plants	1100	1100	22.4	24689.3
<b>A</b>	<b>Soil Work</b>				
1	Site / Jungle Clearance (50%)	1 Ha.	0.5	6022.6	3011.3
2	Alignment & Dagbaling	1 Ha.	1	1104.2	1104.2
3	Earth works in Digging of Pits 1000 x 0.5 m x 0.5 m x 0.4 m	1 M3	100	113.8	11375.4
5	Kana Stubbing 25%	1 Ha.	0.25	30112.8	7528.2
<b>B</b>	<b>Plantation Work</b>				
1	Refilling of Pits 1000x0.5mx0.5mx0.3	100 cum	75	3082.4	2311.8
2	Loading & Unloading of Plants (1000+10% Wastage=1100)	100 No.	1100	617.2	6788.7
3	Carriage of Plants (1000+10% wastage =1100 avg. distance upto 10 km.)	100 No.	1100	220.8	2429.1
4	i) Carriage from site to site	100 No.	1000	147.2	1472.2
	ii) Planting of Plants (1000 No. including 10% replacement)	100 No.	1000	1104.2	11041.5
5	Spot Irrigation (1000 Plants)	100 No.	1000	230.0	2300.3
6	Application of Insecticide (2 Times)	100 No.	2000	46.0	920.1
7	Application of Fertilizers (2 Times)	100 No.	2000	46.0	920.1
8	Weeding & Hoeing 3 Times	100 No.	3000	401.2	12035.2
9	Hand Watering (12 Times)	100 No.	12000	230.0	27603.8
10	Replanting of Plants 10%	100 No.	100	649.8	649.8
11	Rejungle Clearance (2 Times) 50%	Per Ha.	1	2668.4	2668.4
12	Covering (25% plants) of plants	100 No.	250	331.2	828.1
13	Uncovering of plants	100 No.	250	36.8	92.0
14	Restubbing of Kana (1 Time) 25%		0.25	30113.1	7528.3

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15	Laying out & fixing of Barbed Wire	L/s		0.0	8833.2
16	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1 Man 7 Month	9569.3	6698.5
17	Material				
	i) Insecticides / Fertilizers	L/s			5610.518
	ii) POL	L/s			5610.518
	iii) Barbed Wire	L/s			56105.183
	<b>Sub Total</b>				<b>210155.8</b>
	<b>Maintenance 1 Year</b>				
1	Cost of raising plants for 30% replacement	1 No.	300	22.4	6733.5
2	Reopening of Pits 300 x 0.50 x 0.50 x 0.30	1 m3	22.5	66.9	1505.5
3	Refilling of pits with earth in other soils 300 x 0.50 x 0.50 x 0.30	1 m3	22.5	30.8	693.7
4	Loading & Unloading of Plants	1 No.	330	2.8	910.9
5	Carriage of Plants (300+10% Wastage = 330 avg. distance upto 10 Km.)	100 No.	330	220.2	726.5
6	Spreading of plants pit to pit	100 No.	300	147.2	441.7
7	Re-Planting to plants	100 No.	300	369.3	1107.8
8	Spot Irrigation	100 No.	300	230.0	690.1
9	Weeding & Hoeing (Three)	100 No.	3000	401.2	12035.2
10	Application of Insecticide (2 Times)	100 No.	2000	46.0	920.1
11	Application of Fertilizers (2 Times)	100 No.	2000	46.0	920.1
12	Hand Watering (6 Times)	100 No.	6000	401.2	24070.5
13	Rejungle Clearance (2 Times) 50%	Per Ha.	1	2668.4	2668.4
14	Restubbing of Kana	Per Ha.	0.25	30112.8	7528.2
15	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1/10 Man Yr.	9569.3	6698.5
16	Repair of Barbed Wire	L/s		0.0	5610.5
17	POL & Machinery	L/s		0.0	5610.5
18	Material and Supply	L/s		0.0	5610.5
	<b>Sub Total</b>			<b>0.0</b>	<b>84482.2</b>
	<b>2nd Year Maintenance</b>				
1	Cost of raising plants for 15% replacement	1 No.	150	22.4	3366.7
2	Reopening of Pits 150 x 0.50 x 0.50 x 0.40	1 m3	15	66.9	1003.7

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3	Refilling of pits with earth in other soils 150 x 0.50 x 0.50 x 0.30	1 m3	11.25	30.8	346.8
4	Loading & Unloading of Plants	1 No.	165	2.8	455.5
5	Carriage of Plants (150+10% Wastage = 165 avg. distance upto 10 Km.)	100 No.	165	220.2	363.3
6	Spreading of plants pit to pit	100 No.	150	147.2	220.8
7	Re-Planting to plants	100 No.	150	257.1	385.6
8	Spot Irrigation	100 No.	150	230.0	345.0
9	Weeding & Hoeing (Twice)	100 No.	2000	401.2	8023.5
10	Hand Watering (5 Times)	100 No.	5000	230.0	11501.6
11	Rejungle Clearance (2 Times) 50%	Per Ha.	1	2668.4	2668.4
12	Pruning to Plants	100 No.	100	434.9	434.9
13	Watch & Ward for every 10 Ha. (7 months)	Man Year	1/10 Man Yr.	9569.3	6698.5
14	Repair of Barbed Wire	L/s		5610.5	5610.5
15	POL & Machinery	L/s		5610.5	5610.5
18	Material and Supply	L/s		5610.5	5610.5
	<b>Sub Total</b>				<b>52645.8</b>
	<b>3rd Year Maintenance</b>				
1	Cost of raising plants for 10% replacement	1 No.	100	22.4	2244.5
2	Reopening of Pits 100 x 0.50 x 0.50 x 0.40	1 m3	10	6691.1	669.1
3	Refilling of pits with earth in other soils 100 x 0.50 x 0.50 x 0.30	1 m3	7.5	30.8	231.2
4	Loading & Unloading of Plants	1 No.	110	2.8	303.6
5	Carriage of Plants (100+10% Wastage = 110 avg. distance upto 10 Km.)	100 No.	110	1.1	124.0
6	Spreading of plants pit to pit	100 No.	100	147.2	147.2
7	Re-Planting to plants	100 No.	100	257.1	257.1
8	Spot Irrigation	100 No.	100	230.0	230.0
9	Weeding & Hoeing (thrice)	100 No.	3000	401.2	12035.2
10	Hand Watering (8 Times)	100 No.	8000	230.0	18402.5
11	Pruning to Plants 20%	100 No.	200	434.9	869.9
12	Watch & Ward for every 10 Ha. (7 months)	Man Year	1/10 Man Yr.	9569.3	6698.5
13	Repair of Barbed Wire	L/s		5610.5	5610.5
14	POL & Machinery	L/s		5610.5	5610.5

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15	Material and Supply	L/s		5610.5	5610.5
	<b>Sub Total</b>				<b>59044.4</b>
	<b>4th Year Maintenance</b>			0.0	
1	Cost of raising plants for 5% replacement	1 No.	50	22.4	1122.2
2	Reopening of Pits 50 x 0.50 x 0.50 x 0.40	1 m3	5	6691.1	334.6
3	Refilling of pits with earth in other soils 100 x 0.50 x 0.50 x 0.30	1 m3	3.75	30.8	115.6
4	Loading & Unloading of Plants	1 No.	55	2.8	151.8
5	Carriage of Plants (50+10% Wastage = 55 avg. distance upto 10 Km.)	100 No.	55	1.1	62.0
6	Spreading of plants pit to pit	100 No.	50	147.2	73.6
7	Re-Planting to plants	100 No.	50	257.1	128.5
8	Spot Irrigation	100 No.	50	230.0	115.0
9	Weeding & Hoeing (thrice)	100 No.	3000	401.2	12035.2
10	Hand Watering (8 Times)	100 No.	8000	230.0	18402.5
11	Pruning to Plants 30%	100 No.	300	434.9	1304.8
12	Watch & Ward for every 10 Ha. (7 months)	Man Year	1/10 Man Yr.	9569.3	6698.5
13	Repair of Barbed Wire	L/s		5610.5	5610.5
14	POL & Machinery	L/s		5610.5	5610.5
15	Material and Supply	L/s		5610.5	5610.5
	<b>Sub Total</b>				<b>57376.0</b>
	<b>5th Year Maintenance</b>				
1	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1/10 Man Yr.	9569.3	6698.5
	<b>Sub Total</b>				<b>6698.5</b>
	<b>6th Year Maintenance</b>				
1	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1/10 Man Yr.	9569.3	6698.5
	<b>Sub Total</b>				<b>6698.5</b>
	<b>7th Year Maintenance</b>				
1	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1/10 Man Yr.	9569.3	6698.5
	<b>Sub Total</b>				<b>6698.5</b>
	<b>8th Year Maintenance</b>				
1	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1/10 Man Yr.	9569.3	6698.5
	<b>Sub Total</b>				<b>6698.5</b>

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	<b>9th Year Maintenance</b>				
1	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1/10 Man Yr.	9569.3	6698.5
	<b>Sub Total</b>				6698.5
	<b>10th Year Maintenance</b>				
1	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1/10 Man Yr.	9569.3	6698.5
	<b>Sub Total</b>				6698.5
	<b>Total</b>				503895
	<b>Over Head expenses 5%</b>				25195
	<b>Wage Enhancement @ 10%</b>				50390
	<b>G. Total</b>				579479
	<b>Or Say</b>				5,79,479/-
	<b>PCA = <math>0.00784 \times 2 = 0.0157 \times 579479/-</math></b>				9098/-
	<b>Net Present Value = 1.78 ha X 13,57,110/- Rs Per Ha.= 24,15,656/- As per GOI Guideline 50% NPV Rates</b>				12,07,828/-
	<b>Penal Net Present Value = 1.78 ha X 13,57,110/- Rs Per Ha. + 12% Int.</b>				27,05,535/-

Place:Patiala

Date:

  
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