

Indicative Cost Matrix for various alternatives at different voltage levels				
Voltage Level	Type of tower	Span (in m)	Type of Conductor	Indicative cost for laying of transmission line per Km based on past experience (Rs. In Crore)
765 kV D/C	Normal	400	Hexa Zebra	3.83
		250	Hexa Zebra	4.79
	Narrow Base	400	Hexa Zebra	9.72
		250	Hexa Zebra	12.14
	Pole**	250	Hexa Zebra	13.41
	Underground Cable	Technologically not feasible		
400 kV D/C	Normal	400	Quad Moose	2.11
			Twin HTLS	1.41
			Twin Moose	1.24
		250	Quad Moose	2.64
			Twin HTLS	1.76
			Twin Moose	1.55
	Narrow Base	400	Quad Moose	5.36
			Twin HTLS	3.58
			Twin Moose	3.15
		250	Quad Moose	6.70
			Twin HTLS	4.48
			Twin Moose	3.94
	Pole	250	Quad Moose	7.39
			Twin HTLS	4.94
Twin Moose			4.34	
Underground Cable@				12
GIL ***				70
220 kV D/C	Normal	350	Zebra	0.53
			HTLS	0.64
		200	Zebra	0.66
			HTLS	0.8
	Narrow Base	350	Zebra	1.34
			HTLS	1.63
		200	Zebra	1.68
			HTLS	2.04
	Pole	250	Zebra	1.86
			HTLS	2.24
Underground Cable@				7.2
132 kV D/C	Normal	320	Panther	0.36
		150	Panther	0.45

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	Narrow Base	320	Panther	0.76
		150	Panther	1.14
	Pole	250	Panther	1.26
	Underground Cable [@]			1.8
800 kV HVDC (Horizontal)	Normal	400	Lapwing	2.69
		250	Lapwing	3.36
500 kV HVDC (Horizontal)	Pole	250	Lapwing	9.42
	Normal	400	Lapwing	1.32
		250	Lapwing	1.65
	Pole	250	Lapwing	4.62

All costs are indicative exclusive of RoW Cost. For transmission lines mounted on poles, design span used is lower than normal span.

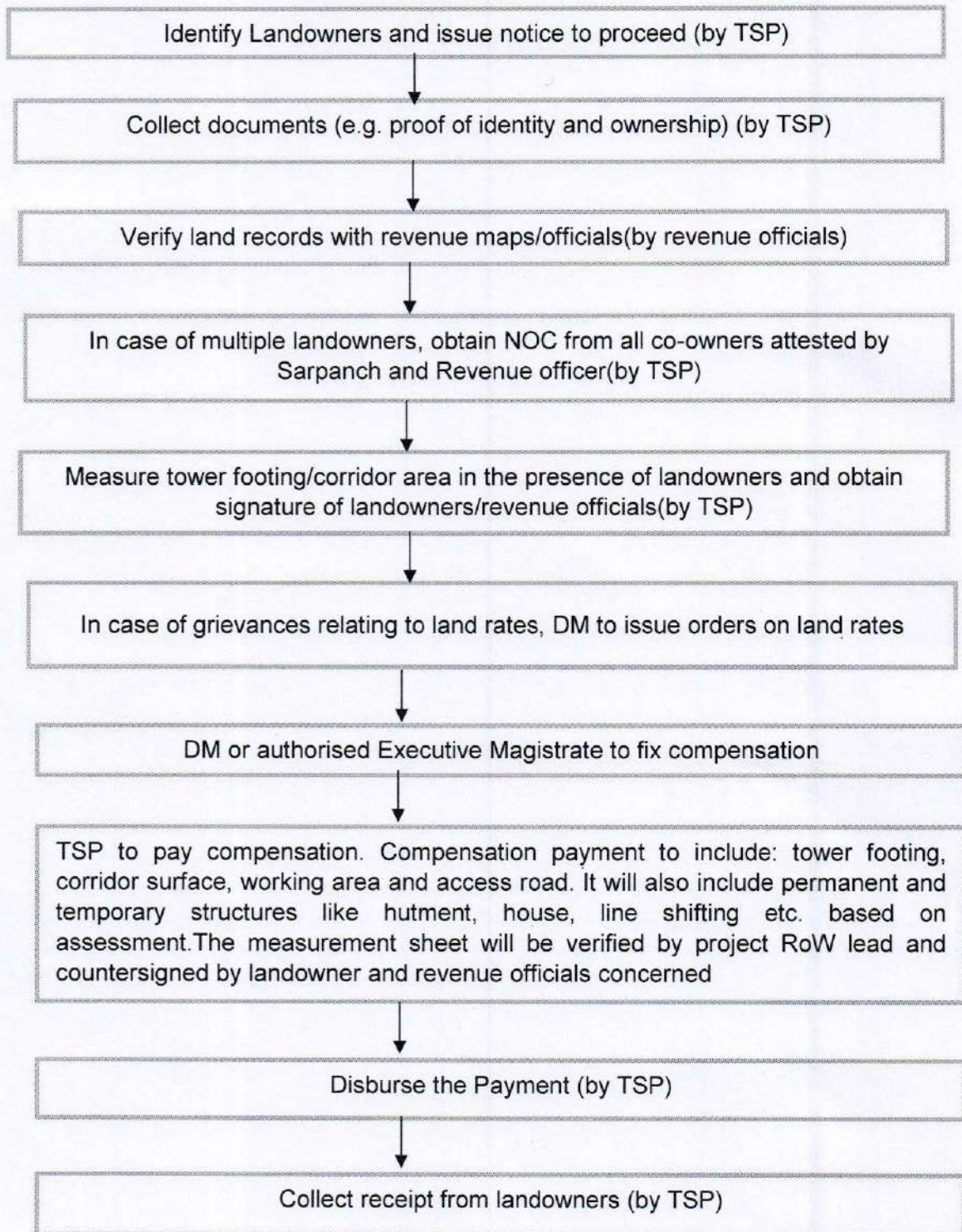
Note: Different insulator string configurations (I and V Types) would not account for considerable difference in per km cost of transmission lines, hence not have been factored in the matrix.

**** Poles prevalent are only for S/c. 765 kV D/C Pole under Design / R&D**

@ Underground Cable for short distances.

***** No GIL experience in country.**

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Standard Operating Procedure (SOP)*2/1/17*