

F.No. 3/4/2016-Trans-Part(4)  
Government of India  
Ministry of Power  
Shram Shakti Bhavan, New Delhi –110 001.  
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Dated: 14.06.2024

To

1. Chief Secretaries/Administrators of all the States/UTs.
2. Chairperson, CEA, New Delhi – with a request to disseminate the subject guidelines to all the stakeholders.
3. Additional Chief Secretaries/Principal Secretaries/Secretaries of Energy of all States/UTs.
4. Secretary, CERC, New Delhi.
5. CMD, Grid India, New Delhi.
6. COO, CTUIL, Gurugram.
7. CMDs of State Power Utilities/SEBs.
8. All Transmission Licensees through COO, CTUIL

**Subject: Guidelines for payment of compensation in regard to Right of Way (RoW) for transmission lines.**

**Reference:** (i) MoP letter No. 3/7/2015-Trans dated 15.10.2015  
(ii) MoP letter No. 3/4/2016-Trans dated 16.07.2020  
(iii) MoP letter No. 3/4/2016-Trans-Part (1) dated 27.06.2023

Sir,

The Ministry of Power, as referenced above, has issued Guidelines for the payment of Right of Way (RoW) compensation concerning transmission lines including those in urban areas. It is imperative to address the RoW issues effectively to expedite the construction of transmission lines and ensure timely completion.

2. After careful consideration of the matter, the Central Government has issued the following guidelines for determining compensation for damages regarding the RoW for laying transmission lines under Sections 67 and 68 of the Electricity Act, 2003, read with Sections 10 and 16 of the Indian Telegraph Act, 1885, in addition to the compensation for normal crop and tree damages. These guidelines are issued in supersession of the earlier guidelines mentioned in the references above.

### **COMPENSATION GUIDELINES FOR TRANSMISSION LINES**

(1) **Applicability:** The compensation shall be payable only for transmission lines supported by a tower base of 66 kV voltage level and above, and not for sub-transmission and distribution lines below 66 kV.

(2) **Authority for determination of Compensation:** District Magistrate/District Collector/Deputy Commissioner shall be the authority for determining the compensation.

*3/11/24*

(3) **Determination of Compensation:** The compensation shall ordinarily be based on the Circle rate/Guideline value/Stamp Act rates of the land, except where the market rate exceeds the Circle rate/Guideline value/Stamp Act rates. In such instances, the land value shall be determined based on the prevailing market rate as ascertained by the District Magistrate/District Collector/Deputy Commissioner in the manner as may be specified by the State Government. The determined land value shall serve as the basis for compensation and shall be promptly communicated by the respective District Magistrate/District Collector/Deputy Commissioner.

(4) **Tower Base Compensation:** Compensation for the tower base area shall be 200% of the land value. The tower base area shall be the area enclosed by the four legs of the tower at ground level, plus an additional one (1) meter extension on each side.

(5) **RoW Corridor Compensation:** The compensation amount for Right-of-Way (RoW) corridor shall be 30% of the land value. Land within the RoW corridor, as defined in Schedule VII of the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022 (**Annex-I**), shall be eligible for compensation. This compensation will address the potential diminution of land value due to the presence of overhead lines or underground cables within the RoW corridor. No construction activity of any kind would be permitted within the RoW of the transmission line. States/UTs may decide higher rate depending on the area and urgency of the work.

(6) **Alternate Compensation:** In areas where land owner/owners have been offered/accepted alternate mode of compensation by Corporation/Municipality concerned under Transfer of Development Rights (TDR) policy of the State/UT, the licensee /utility shall deposit compensation amount as per (4) to (5) above with the Corporation/ Municipality/ Local Development Authority or the State Government concerned.

(7) **Areas with RoW constraints:** When laying transmission lines in areas with RoW constraints, various technologies can be considered to optimize the use of space. These technologies are outlined in the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022. Some options include: steel pole structures, narrow-based lattice towers, multi-circuit and multi-voltage towers, single-side stringing with lattice or steel poles, XLPE underground cables, Gas Insulated Lines (GIL), compact towers with insulated cross arms, Voltage Source Converter (VSC) based High Voltage Direct Current (HVDC) systems, and more. A cost matrix comparing these technologies is attached in **Annex-II** for reference by implementing agencies. This matrix can help them choose the most cost-effective option for each project.

(8) **Landowner Identification:** During the check survey conducted at the execution stage, the names of landowners whose property falls within the transmission line's Right-of-Way (RoW) will be documented. This process shall adhere to the Regulation 84(8) of the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022.

*John*

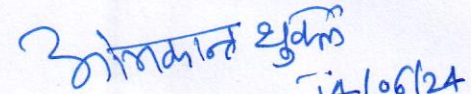
(9) **Compensation Payment:** Compensation payment shall be one-time and upfront. Whenever possible, compensation will be paid through various digital payment methods, such as the Aadhaar Enabled Payment System (AEPS) and Unified Payments Interface (UPI).

(10) **Standard Operating Procedure (SOP):** States/UTs and transmission developers should refer to the Standard Operating Procedure (SOP) at **Annex-III** for detailed guidelines.

3. The States/UTs may adopt these guidelines in their entirety or issue their own modified guidelines. In the absence of State Government guidelines, these guidelines issued by the Central Government shall apply for determining compensation.

4. This issues with the approval of the Minister of Power.

Yours faithfully,



(Om Kant Shukla)  
Director (Trans)

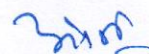
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Copy to:

1. Secretaries to the Government of India.
2. Prime Minister's Office.
3. Technical Director, NIC, Ministry of Power – with the request to upload on the website of Ministry of Power.
4. PS to MoP.
5. Addl. PS to MoSP.
6. Sr. PPS/ PPS/ PS to Secretary (Power)/ AS(Trans)/ JS&FA/ AS (IC)/ All Joint Secretaries/ EA/ All Directors/ Deputy Secretaries, Ministry of Power.

**Right-of-way (ROW) for normal route, forest area, urban area, populated area and approach section near substation**

Voltage level	Configuration	Conductor type	Terrain	Design Span	String Type	RoW width in m (for compensation purpose)
765kV D/C	Vertical	ACSR ZEBRA	Normal route without constraint	400	"I" String	67
					"V" String	
					Tension	
			Forest	300	"V" String	56
					Tension	
			Urban area / populated area / approach section near substation	250	"V" String	54
Tension						
765kV S/C	Vertical /Delta	ACSR BERSIMIS	Normal route without constraint	400	"I" String	64
					"V" String	
					Tension	
			Forest	300	"V" String	54
					Tension	
			Urban area / populated area / approach section near substation	250	"V" String	52
Tension						
765kV S/C	Horizontal	ACSR BERSIMIS	Normal route without constraint	400	"I" String	74
					"V" String	
					Tension	
			Forest	300	"V" String	65
					Tension	
			Urban area / populated area / approach section near substation	250	"V" String	62
Tension						
±800kV HVDC	Horizontal	ACSR Lapwing	Normal route without constraint/Forest/ Urban	400	"Y" String	69
±500kV HVDC	Horizontal	ACSR Lapwing	Normal route without constraint/Forest/ Urban	400	"V" String	52



400kV D/C	Vertical	ACSR MOOSE	Normal route without constraint	400	"I" String	46	
					"V" String		
					Tension		
			Forest	300	"V" String		40
					Tension		
			Urban area / populated area / approach section near substation	250	"V" String		38
Tension							
400kV S/C	Horizontal/ Vertical	ACSR MOOSE	Normal route without constraint	400	"I" String	52	
					"V" String		
					Tension		
			Forest	300	"V" String		47
					Tension		
			Urban area / populated area / approach section near substation	250	"V" String		44
Tension							
1200kV	Horizontal	ACSR Moose	Normal route without constraint/Forest/ Urban	400	"V" String	89	
220kV D/C	Vertical	ACSR ZEBRA	Normal route without constraint	350	"I" String	32	
					"V" String		
					Tension		
			Forest	300	"V" String		28
					Tension		
			Urban area / populated area / approach section near substation	200	"V" String		24
Tension							
132kV D/C	Vertical	ACSR PANTHER	Normal route without constraint	320	"I" String	25	
					"V" String		
					Tension		
			Forest	200	"V" String		21
					Tension		
			Urban area / populated area / approach section near substation	150	"V" String		19
Tension							

110 kV D/C		ACSR PANTHER	Normal route without constraint	305	"I" String	22
					"V" String	
					Tension	
			Forest	200	"V" String	19
					Tension	
Urban area / populated area / approach section near substation	150	"V" String	17			
		Tension				
66kV	Vertical	ACSR PANTHER	Normal route without constraint	250	"I" String	18
					"V" String	
					Tension	
			Forest	150	"V" String	14
					Tension	
			Urban area / populated area / approach section near substation	100	"V" String	13
Tension						

**Note:** D/c: double circuit; S/c: single circuit

*2/1/21*

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

**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)
	Narrow Base	320	Panther	0.76
		150	Panther	1.14
	Pole	250	Panther	1.26
	Underground Cable <sup>@</sup>			1.8
800 kV HVDC (Horizontal)	Normal	400	Lapwing	2.69
		250	Lapwing	3.36
	Pole	250	Lapwing	9.42
500 kV HVDC (Horizontal)	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.

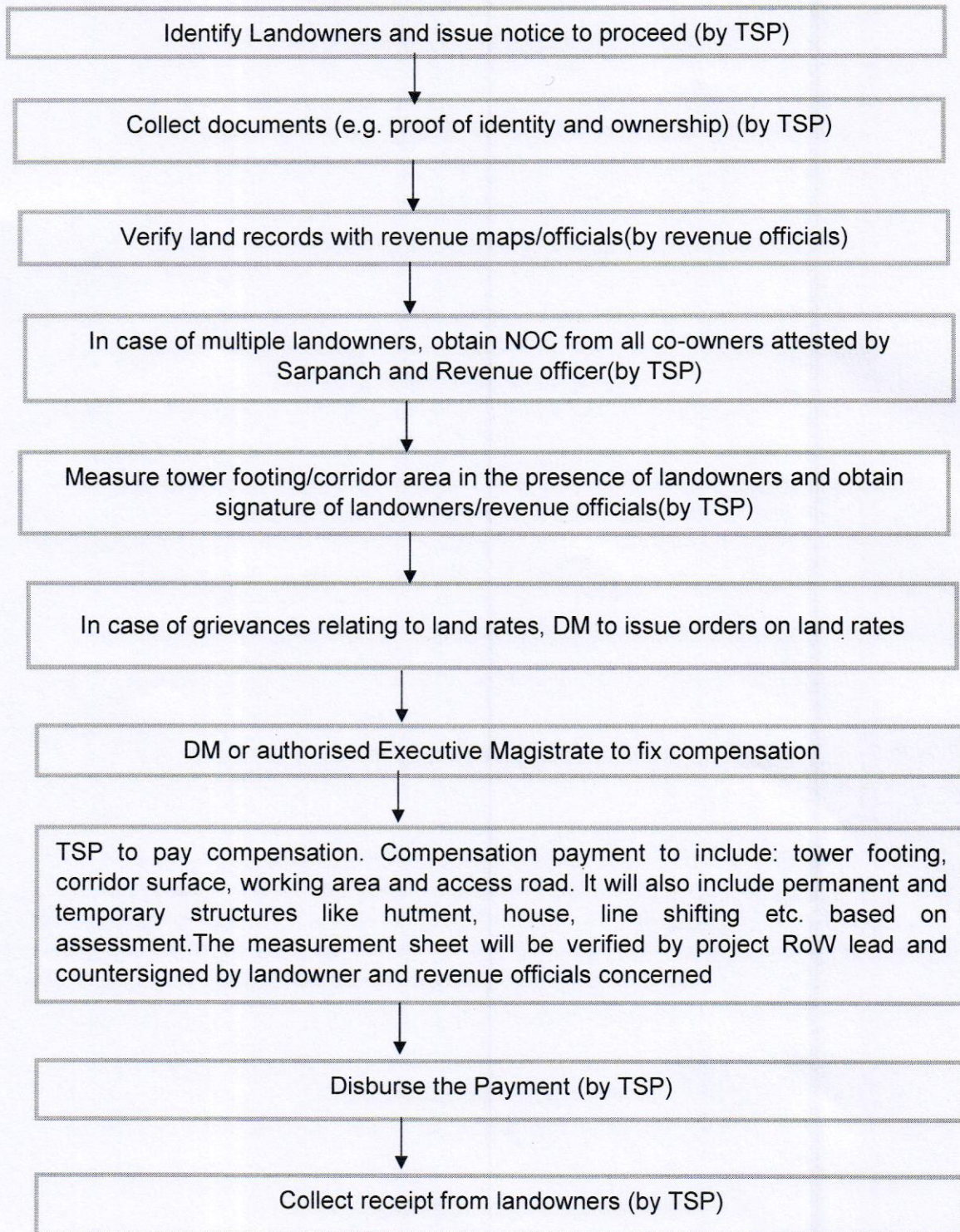
**\*\* Poles prevalent are only for S/c. 765 kV D/C Pole under Design / R&D**

**@ Underground Cable for short distances.**

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

3/17



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