

No. 3/4/2016-Trans  
Government of India  
Ministry of Power  
Shram Shakti Bhawan, Rafi Marg, New Delhi – 110001

Dated, 16<sup>th</sup> July, 2020

To

1. Chief Secretaries/ Administrators of all the States/UTs.
2. Chairperson, CEA, New Delhi- with a request to disseminate the above guidelines to all the stakeholders.
3. CMD, PGCIL, Gurgaon.
4. CMD, POSOCO, New Delhi.
5. Secretary, CERC, New Delhi.
6. CMD of State Power Utilities/ SEBs

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

Sir,

In order to facilitate early resolution of Right of Way (RoW) issues for laying of transmission lines, Ministry of Power vide OM No. 3/7/2015-Trans dated 15th October, 2015 had issued the guidelines for payment of compensation towards damages with regard to Right of Way for transmission lines. The guidelines inter-alia had recommended compensation for 85% of the land value for tower footing and upto 15% of the land value for RoW of the line for transmission system of 66 kV and above voltage level. The above guidelines were communicated by the Ministry of Power to Chief Secretaries of all the States with the request to take suitable decision regarding adoption of the guidelines considering that acquisition of land is a state subject.

2. During a review meeting of critical transmission lines, taken by Secretary (Power), Govt. of India on 19.7.2016, it was inter alia decided to constitute a Committee under the chairmanship of Additional Secretary, Ministry of Power to analyse the issues relating to RoW for laying of transmission lines in the urban areas of the country and to suggest a methodology for payment of compensation on this account. The Committee held several meetings to obtain the views of State Governments on the issue and submitted its Report along with the recommendations (copy of the Report is at **Annex-I**).

3. The recommendations made by the above Committee are hereby formulated in the form of following guidelines for determining the compensation in "Urban Areas" towards "damages" as stipulated in section 67 and 68 of the Electricity Act, 2003 read with Section 10 and 16 of Indian Telegraph Act, 1885, which will be in addition to the compensation towards normal crop and tree damages:

- i. Compensation @ 85% of land value as determined by District Magistrate or any other authority based on circle rate/ Guidelines value / Stamp Act rates for tower base area (area bounded by concrete as visible from outside of four legs of the towers) impacted severely due to installation of tower / pylon structure.
- ii. Compensation towards diminution of land value in the width of Right of Way (RoW) Corridor due to laying of transmission line and imposing certain restriction would be decided by the States as per categorization/ type of land in different places of States, subject to a maximum of 15 % of land value as determined based on Circle rate /Guidelines value/ Stamp Act rates.

- iii. In addition to the provisions mentioned at Para 3(i) and (ii) above, additional compensation in form of **Non-Usability allowance** up to 15% of the land value for the width of RoW corridor would be applicable in the notified urban areas. No construction activity of any kind would be permitted under the RoW of the transmission line.
- iv. For compensation purpose, the width of RoW corridor shall not be more than that prescribed in the Table 3 (summarized) in the **Annex-I** and for tower base, the compensation shall be paid for actual base width of tower (area bounded by concrete as visible from outside of four legs of the towers). The indicative base width of tower is given under column (12) in Table-3 (Detailed) of **Annex-I**.
- v. While making choice of technology to be used for laying of transmission lines in RoW constraint area, various technological options needs to be assessed keeping in view the reduction in RoW, feasibility of implementation, overall cost of laying the line. A tentative Cost matrix of the available technologies is attached as **Annex-II**. The same can be referred by the implementation agencies keeping in view the cost benefit aspects.
- vi. Payment of compensation shall be done through various digital modes of payment such as AADHAR enabled payment system (AEPS), Unified Payment Interface (UPI) etc. where feasible.
- vii. The payment towards compensation for RoW in urban areas would be onetime/upfront. In case of any other arrangement for payment of compensation, the same needs to be notified by individual states.

**Note:** For the purposes of these guidelines, Urban Area is defined as all places with a municipality, corporation, cantonment board or notified town area committee etc

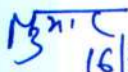
4. The above compensation amount will be payable only for transmission lines supported by a tower base of 66 KV and above, and not for sub-transmission and distribution lines below 66 KV in notified Urban Areas.

5 Necessary action may kindly be taken accordingly. These guidelines would not only facilitate an early resolution of RoW issues in urban areas but also facilitate completion of the vital transmission lines in urban areas through active support of State/ UT administration.

6 All the States/UTs etc are requested to take suitable decision regarding adoption of the guidelines considering that "Land" is a State subject.

Encl.: As above

Yours faithfully,

  
16/7/20

(Tanmay Kumar)

Joint Secretary (Trans)

Copy, along with enclosure, forwarded to the following:

1. Secretaries to the Government of India.
2. Prime Minister's Office.
3. Technical Director, NIC, Ministry of Power- with the request to host subject Guidelines on the website of Ministry of Power.
4. Copy to PS to Hon'ble MoSP (IC) / Secretary (Power) / AS (SKGR) / AS (SM) / AS&FA / All Joint Secretaries/ EA/ All Directors/DSs, Ministry of Power.

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**REPORT OF THE COMMITTEE FOR FINALISATION  
OF COMPENSATION IN REGARD TO RIGHT OF  
WAY (ROW) FOR TRANSMISSION LINES IN URBAN  
AREAS**

**INDEX**

| <b>S.no</b> | <b>Content</b>  | <b>Page no.</b> |
|-------------|---|-----------------|
| 1.          | Background  | <b>1</b>        |
| 2.          | Constitution of Committee and Terms & reference of Committee  | <b>1</b>        |
| 3.          | Proceeding of Committee   | <b>3</b>        |
| 4.          | Detail Report   | <b>6</b>        |
| 5.          | Recommendations for laying of transmission lines 66 kV and above in urban/populated area/ forest area in the country. | <b>11</b>       |
| 6.          | Recommendations for laying of 33 kV transmission line   | <b>14</b>       |
|             | Appendix-I  | <b>16</b>       |
|             | Appendix-II   | <b>18</b>       |
|             | Appendix-III  | <b>21</b>       |
|             | Appendix -IV  | <b>26</b>       |
|             | Appendix -V   | <b>62</b>       |
|             | Appendix -VI  | <b>83</b>       |
|             | Appendix -VII   | <b>107</b>      |
|             | Appendix -VIII  | <b>112</b>      |
|             | Appendix -IX  | <b>126</b>      |
|             | Appendix -X   | <b>128</b>      |
|             | Appendix -XI  | <b>130</b>      |
|             | Appendix-XII  | <b>133</b>      |
|             | Appendix-XIII   | <b>137</b>      |

## **Report of the Committee for finalisation of compensation in regard to Right of Way (RoW) for transmission lines in urban areas.**

### **1. Background**

- 1.1 The transmission of power on overhead line will continue to dominate over other mode of power transmission due to techno-economic considerations / reasons. Right of Way (RoW) compensation issue has become very critical and completion of many important transmission lines is held up due to stiff resistance from the landowners whose land falls in the RoW and demand of enhanced compensation. Hence, focus is to explore the possibilities of reduction / optimisation of transmission corridor width through various technological options.
- 1.2 The matter of RoW for laying of transmission lines in the country was deliberated during the Power Ministers' Conference on 9-10 April 2015 at Guwahati and a committee under the Chairmanship of Special Secretary, Ministry of Power was constituted to analyse the issues related to Right of Way for laying of transmission lines in the country and to suggest a uniform methodology for payment of compensation on this account. The committee comprised of Chairperson, CEA, Principal Secretary (Energy) of M.P., U.P, Maharashtra, Karnataka, Kerala, Jt. Secretary (Trans), MoP, CMD/Dir (Projects), POWERGRID and Chief Engineer (SP&PA), CEA as convener and Member Secretary.
- 1.3 The Committee met three times (20.04.2015, 30.04.2015 and 1.06.2015) before finalizing its recommendations. The committee finalized its recommendations for payment of compensation towards damages in regard to Right of Way for transmission lines, which was issued via MoP OM No. 3/7/2015-Trans dated 15<sup>th</sup> October, 2015. The guidelines are applicable only for transmission lines of 66 kV and above voltage level. The guidelines recommended compensation for 85% of the land value for tower footing and 15% of the land value for RoW of the line. The above guidelines were communicated by the Ministry of Power to Chief Secretaries of all the States with the request to take suitable decision regarding adoption of the guidelines considering that acquisition of land is a state subject.
- 1.4 Further, MoP has constituted a committee to analyze the issues related to RoW for laying of transmission lines in the urban areas of the country and to suggest a methodology for payment of compensation on this account.

### **2. Constitution of committee and Terms & reference of Committee**

- 2.1 Ministry of Power (MoP) vide letter no. 3/4/2016-Trans dated 11-08-2016 has constituted a committee under the Chairmanship of Ms Shalini Prasad, Additional Secretary Ministry of Power to analyse the issue relating to RoW for laying of transmission lines in the urban areas of the country and to suggest a methodology for payment of compensation on this

account (**copy enclosed at Appendix-I**). The composition of the Committee is given below:

- (i) Ms. Shalini Prasad, Additional Secretary, Ministry of Power
- (ii) Smt. Jyoti Arora, Joint Secretary, Ministry of Power
- (iii) Chairperson/Member (PS). Central Electricity Authority
- (iv) Principal Secretary/Secretary (Energy) Govt. of Karnataka
- (v) Principal Secretary/Secretary (Energy) Govt. of Kerala
- (vi) Principal Secretary/Secretary (Energy) Govt. of Maharashtra
- (vii) Principal Secretary/Secretary (Energy) Govt. of U.P
- (viii) Principal Secretary/Secretary (Energy) Govt. of Haryana
- (ix) CMD PGCIL
- (x) Chief Engineer PSPA-I. CEA Convener & Member Secretary

2.2 The Terms of Reference (ToR) of the Committee include:

- (i) To review/analyse existing procedures for compensation and suggest possible modification to address following issues.
  - a. Possible changes in assessment process
  - b. Procedure for timely release of compensation payment
  - c. Measure to stop payment to ineligible persons
  - d. Possibilities of releasing certain percentage in advance to reduce resistance
- (ii) To suggest procedure to assess eligibility and subsequent compensation for structure/hut/bore well etc. including measure to ensure their shifting/removal after payment of Compensation.
- (iii) To explore possibility of enlarging scope of survey to include land scheduling for complete ROW width including name of land owners to facilitate payment of diminution of land value compensation to all eligible persons.
- (iv) To suggest strategy/mechanism for ensuring compliance/implementation by State Govt.
- (v) To explore possible methodology for direct online payment, say through Jan Dhan Yojana.
- (vi) To explore the technological options for reducing the tower footing/base, area/corridor requirements.
- (vii) To explore possibility of reduction of transmission corridor width/selective restricted use of corridor in urban zones by using technical advances/ raising heights of towers/ adequate safety measures/revisiting clearance requirements especially for 220 kV and 132 kV levels.

### 3. Proceeding of Committee

3.1 The 1<sup>st</sup> meeting of the Committee was held under the Chairmanship of Ms. Shalini Prasad, Additional Secretary, MoP on 30-08-2016 and the following decisions were taken after detailed deliberations.

- (i) CEA shall explore the different technical option available for further optimizing the Right of Way width, Safety clearances such as:
  - (a) New compact tower design
  - (b) Possibility of including caging of conductor in the existing/new tower to reduce swing of conductor.
  - (c) Feasibility of underground cable laying for EHV lines.
  - (d) Feasibility of Gas insulated lines.

The Minutes of Meeting (MoM) is enclosed at **Appendix-1I**

3.2 As per decision of 1<sup>st</sup> meeting, Chief Engineer (PSP&PA-I), CEA and Convener & Member Secretary of the Committee had taken a meeting on 23-09-2016 to explore different technical options available for further optimizing the RoW width, safety clearances etc. After detailed deliberations, the broad parameters / factors were listed down (type of conductor, design span, conductor operating temperature, configuration of insulator string, swing angle, cage width, minimum safety clearance) to carry out the calculation of RoW for different voltage types and it was decided that M/s Powergrid, M/s Sterlite Grid Limited, M/s Kalpatru Power Transmission Ltd. and M/s Essel Infraprojects Limited shall furnish the calculations of RoW within a week's time.

The Minutes of Meeting (MoM) is enclosed at **Appendix-III.**

3.3 The 2<sup>nd</sup> meeting of the Committee was held under the Chairmanship of Ms. Shalini Prasad, Additional Secretary, MoP on 30-09-2016 and the following decisions were taken after detailed deliberations.

- (a) To further explore any other technological options available for reduction of RoW based on worldwide practices and the cost implication.
- (b) PGCIL to provide international practices for addressing the RoW issue in urban/populated/forest areas.
- (c) To explore the possibility of framing detailed guidelines to incorporate RoW consideration at micro planning stage and to explore various options for optimum utilization of the existing Row as far as possible right at planning stage
- (d) To explore the possibility of dividing the route of transmission lines into few broad categories such as normal route, route through Reserved forest area and route through Urban areas/Populated area and notifying different RoW for different category suggesting specific technical measures for urban/populated area/ forest areas.

The Minutes of Meeting (MoM) is enclosed at **Appendix-IV**

3.4 The 3<sup>rd</sup> meeting of the Committee was held under the Chairmanship of Ms. Shalini Prasad, Additional Secretary, MoP on 02-11-2016 and the following decisions were taken after detailed deliberations.

- (a) A committee comprising of representatives CEA, PGCIL, Maharashtra and Kerala will calculate and create matrix for RoW requirements considering all factors influencing the RoW (span, conductor, I/V string, swing angle) for one wind zone, say wind zone 4.
- (b) Chief Town planners or other concerned authority who is involved in town planning would be invited in the next meeting to discuss the provisions of RoW for laying of transmissions lines.
- (c) The next meeting is proposed for 21<sup>st</sup> November, 2016 for reviewing the calculation submitted by the committee.
- (d) The state utilities shall come out with suggestions regarding methodology for calculation of compensation.

The Minutes of Meeting (MoM) is enclosed at **Appendix-V**

3.5 In the 3<sup>rd</sup> meeting of the Committee, held on 02-11-2016, it was decided to constitute a Committee comprising representatives from CEA, PGCIL, Govt. of Kerala and Govt. of Maharashtra under the Chairmanship of Chief Engineer (PSE&TD), CEA, to study all the factors influencing the RoW for a particular Wind zone and to bring out the requirement for different combinations. Accordingly, a Committee was constituted with the following composition:

- (a) Chief Engineer (PSE&TD), CEA -Chairman
- (b) Chief Electrical Inspector, CEA
- (c) Representative of PGCIL
- (d) Representative of Govt. of Kerala
- (e) Representative of Govt. of Maharashtra

3.6 The 4<sup>th</sup> meeting of the Committee was held under the Chairmanship of Ms. Shalini Prasad, Additional Secretary, MoP on 08-12-2016. In the meeting, Chief Engineer (PSETD), CEA presented the RoW matrix prepared in consultation with POWERGRID and Kerala considering various factors (span, conductor, I/V string, swing angle) influencing the RoW for wind zone 4 and the following decisions were taken after detailed deliberations.

- (a) A sub-committee comprising of representatives from CEA, Punjab, Uttarakhand, Himachal Pradesh and TATA Power and few others would deliberate and finalise RoW requirements for 33 kV transmission lines
- (b) Deliberations to be held with Chief Town planners or other concerned authority, who are involved in town planning, to discuss about dedicated corridor for laying of transmission lines for greenfield projects.
- (c) CEA to consider framing of guidelines stipulating use of monopole structure / multi-circuit / multi-circuit & multi-voltage towers in urban areas and in approach section near substation. The use of such structures can be considered by Utilities for other areas based on economics.



- (d) CEA and PGCIL to prepare a Draft Report concluding the decisions taken by the Committee.
- (e) The issue regarding compensation methodology would be discussed further by MoP with state utilities.

The Minutes of Meeting (MoM) is enclosed at **Appendix-VI**.

3.7 The 5<sup>th</sup> meeting of the Committee was held on 08-02-2017 wherein the following decisions were taken:

- (a) Additional compensation in form of Non-usability allowance of 15% of the land value for the width of RoW corridor would be applicable in the notified urban areas. No construction activity of any kind would be permitted under the RoW of the transmission line.
- (b) The RoW for 33 kV transmission lines as finalized by the committee for the purpose would be included in the draft report of the Committee on Row compensation for urban areas and the same would be circulated to members of the committee for their comments.
- (c) After receipt of the comments from the members of the committee, the final report of the committee would be issued.
- (d) Chief Electrical Inspectorate, CEA would initiate / circulate a discussion paper allowing construction activity under the RoW of the transmission line.

The Minutes of Meeting (MoM) is enclosed at **Appendix-VII**.

3.8 The committee constituted by MoP vide its OM dated 20.1.2017, under the chairmanship of Chief Engineer, PSPA-I, CEA to deliberate and finalise the Right of Way (RoW) requirements for lines at 33 kV level submitted its report on 07.04.2017. The same is enclosed at **Appendix-VIII**.

3.9 The 6<sup>th</sup> meeting of the Committee was held under the Chairmanship of Ms. Shalini Prasad, Additional Secretary, MoP on 09-05-2017. The recommendations made in the Draft Report for finalization of compensation concerning Right of Way (RoW) for transmission line falling in urban areas were circulated to the members of the Committee before the meeting. In the meeting, the recommendations made in the draft report were discussed item-wise and Members of the Committee were in agreement on the Draft Report except for some minor changes. The Committee members were requested to send their additional comments, if any, within a week so that the report could be released after incorporation of the same. As no comment was received from the Committee members, the final report was submitted by CEA to MoP vide letter dated 14.06.2017.

The Minutes of Meeting (MoM) is enclosed at **Appendix-IX**.

3.10 The 7<sup>th</sup> meeting of the Committee was held under the Chairmanship of Ms. Bharati, Joint Secretary (Trans), MoP on 13.09.2017 to freeze the final report of the Urban RoW Committee and get it signed by all the Committee members. However, as the Committee members from State Governments had sent their representatives in the meeting, the final

report could not be signed. Further, since the representatives of Government of Uttar Pradesh and Maharashtra raised concern over certain clauses in the final report, all the members of the Committee were requested to send their additional comments on any of the clause of the Report, if any, within a week so that in the subsequent meeting any necessary changes can be incorporated and the final report of the Urban RoW Committee could be signed by the members.

The Minutes of Meeting (MoM) is enclosed at **Appendix-X**

3.11 The 8<sup>th</sup> meeting of the Committee was held under the Chairmanship of Joint Secretary (Trans), MoP on 03.05.2018 and the following decisions were taken after detailed deliberations:

- (a) Urban area should be defined in the guidelines. CEA in consultation with MoUD would work out the definition of urban areas for the purpose of RoW.
- (b) Further reduction in RoW requirement at various voltage levels (with the technological advancement, maintaining adequate safety clearances) vis-à-vis as given in the Urban RoW report may be allowed with the approval of CEA and in this case, compensation for the reduced RoW requirement should be allowed. In this regard, a suitable paragraph would be included in the Urban RoW report.
- (c) The option of providing annuity based compensation may be removed from the recommendation of this Urban RoW report.
- (d) To provide up to 15% additional compensation for the RoW requirement in the urban area.
- (e) The definition of tower base area to include the area bounded by concrete (as visible from outside) of the four legs of the tower.

The Committee members were requested to provide their comments, if any, within one month from the date of issue of the minutes.

The Minutes of Meeting (MoM) is enclosed at **Appendix-XI**

#### **4. Detail Report**

4.1 Generally, the transmission line towers are of two types (a) self-supporting type (lattice structure / steel pole structure) (b) Guyed type. In India, self-supporting lattice structures are being most commonly used for EHV transmission lines. In recent years, use of monopole structures are also increasing in specific areas due to much reduced footprints, less component and faster erection & commissioning. The high cost, difficulty in transportation, increase in number of poles due to reduction in design span, special design consideration for multi-circuit towers and limited manufacturing facility are some of the bottlenecks in construction of transmission lines with monopole structure.

4.2 Right of Way (RoW) is the strip of land immediately below and adjacent to a transmission line. The width of RoW required for a transmission line is based on the consideration for safety clearances as per CEA (Measures relating to safety and Electric supply) Regulations 2010, Electromagnetic Field (EMF) exposure limits and design consideration for tower structure. The RoW also provide an access corridor for maintenance of transmission lines,