

26: SOP for Reconciliation of Dismantled Tower Material with Newly Issued Material for Rehabilitation

1. Transmission Lines with Nonstandard Towers

The conductor of transmission lines constructed before the issuance of WAPDA specifications has completed its useful life and has been deteriorated. The rehabilitation of these transmission lines with the use of existing towers can be arranged as under:

- i. For transmission lines in congested urban areas, the High Tensile Low Sag (HTLS) conductor which has less weight and high current carrying capacity as compared to already installed conductor can be used by replacing existing deteriorated conductor with new technology-based conductor on the same towers.
- ii. Where these transmission lines pass through areas like open fields, roads, etc. existing deteriorated conductor can be replaced with high current carrying capacity conductor (e.g. ACSR Lynx with ACSR Rail conductor) with the following re-enforcements.
 - Mid spanning with towers and poles.
 - Replacement of tower hardware.
 - Replacement of cross arms.
- iii. Where it become necessary to dismantle these towers it can be used for less voltage transmission lines, if feasible.

- iv. Where options i to iii are not viable, such towers should be dismantled and their braces, healthy insulators and healthy line hardware may be kept in stores for emergency use on existing towers of same type.

2. Standard Towers

- i. For rehabilitation of transmission lines, mid spanning will be a preferred way instead of dismantling of existing towers for construction of new transmission lines.
- ii. Where re-routing of existing transmission line is required, the same towers can be reused. Following material has to be arranged for its reassembling.
 - Stubs along with allied material.
 - Nuts and bolts.
 - Missing braces, disc insulators, line hardware, etc.
- iii. Where dismantling of tower is carried out after declaring it spare or due to some other reason, it will be dismantled in a proper way and dismantled braces are stacked in way as stacking of new tower braces is carried out. The material required for its re-assembling will be same as mentioned at Sr. No-ii.
- iv. The healthy tower material shall be returned to ware house/store as serviceable item through proper Material Return Note (MRN) and the same may be re-drawn through proper departmental procedure of Store Requisition (SR).
- v. Where tower is damaged /collapsed its braces can be installed against missing braces of healthy towers and cross arms can be used on the

towers where diversion of transmission line is more than 60 degree. As per practice in vogue, additional cross arms are being purchased instead of using available ones.

- vi. Dismantled braces may be properly stacked and be kept at ware house / c-type store. Its inventory may be arranged at central level and the same will be re-used with the approval of Chief Engineer (O&M) T&G of concerned DISCO.
- vii. The material shall be returned and drawn by adopting proper store procedure in vogue.

viii. Where issue of less clearance of conductor due to earth filling etc. occurs and become safety hazard, the same tower can be used with the addition of leg extension, for which following material have to be arranged.

- Leg extension
- Stubs along with accessories □ Nuts and bolts.

3. Steel Tubular Poles

Steel tubular poles can easily be dismantled and re-used. Following material will have to be arranged:

- Foundation nuts and bolts having same mechanical strength & dimensions as provided by the original manufacturer.
- This material can be arranged from the local market.
- Third party vetting / inspection of the material shall be carried out before use.