

## Framework for Implementation of National Electrical Safety Grounding Standards for Communication Infrastructure

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**Abstract :** Communication infrastructure has been installed, operated, and maintained all over the world according to defined electrical safety standards for separate or joint structures. These safety standards have been set for the safeguard of public, utility workers (employees and contractors), utility facilities, electrical communication equipment's connected to the utility facilities and other facilities or premise adjacent to utility facilities. Different communication utilities in Pakistan use standards of different countries due to the absence of Common National Electrical Safety Standards of Pakistan. It is really important to devise a framework for implementation of a uniform standard for strict compliance. In this context, it is important to explore the compliance of safety standards for communication conductors and equipment for separate or joint structures for which NESC standards are taken as reference. Specific reference to grounding techniques including grounding AC/DC systems and its frames, leaving Fences, Messenger wires and special circuits used for the protection for lightning etc, ungrounded so recommendations are also given after in-depth analysis of current technical practices for the installation and maintenance of communication infrastructure.

**Keywords :** utility facilities, grounding electrodes, special circuits, grounding conductor

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