

IEEE Guide for Safety in the Installation of Mobile Substation Equipment

IEEE Power and Energy Society

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Substations Committee

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Abstract: Information pertaining to the installation of mobile substation equipment up to 245 kV is provided in this guide.

Keywords: arc flash, grounding, IEEE 1268™, installation, lightning stroke protection, mobile substation equipment, shielding, step voltage, surge protection, touch voltage, transferred voltage

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Introduction

This introduction is not part of IEEE Std 1268™-2016, IEEE Guide for Safety in the Installation of Mobile Substation Equipment.

Prior to the development of this guide, information regarding safe installation and operation of mobile substations was not available from a single source. To provide a single source of information for general transport, set-up, installation, and safe operation of mobile substation equipment, members of Working Group D4 (Substation Safety) unanimously voted to develop a comprehensive guide. The West Coast Subcommittee volunteered to assist in the development of the guide. Accordingly, a project authorization was requested and was approved by the IEEE Standards Board in September 1991 and resulted in the original 1997 edition of this guide and an updated version in 2005.

The 2015 revision is the result of several comments received in a previous reaffirmation ballot. This revision addresses those comments, most of which requested clarification or more direct guidance on the installation of mobile substation equipment.

This guide was developed with the intent to identify specific areas of concern and offer design assistance in those areas. Recognizing that mobile substations and their installation practices vary widely, the intent of this guide is not to provide a step-by-step set of instructions for individual sites. Instead, an attempt was made by the working group to provide generic information on topics and items pertaining to safe installation and operation of mobile substation equipment.

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1. Overview

1.1 Scope

This guide contains information on general topics and items pertaining to safety when installing substation equipment. The guide recognizes that mobile substations vary widely regarding the particular devices and equipment used. It is beyond the scope of this guide to provide a specific step-by-step set of instructions for individual units. This guide covers installation of mobile substation equipment up to 245 kV.

1.2 Purpose

The purpose of this guide is to establish general transport, setup and installation guidelines when using mobile substation equipment, with special regards to safety. This guide has been developed with the intent to identify specific areas of concern and offer design assistance in those areas.

2. Normative references

The following referenced documents are indispensable for the application of this document (i.e., they must be understood and used, so each referenced document is cited in text and its relationship to this document is