

IEEE Guide for Electric Power Substation Physical and Electronic Security

Sponsor

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of the
IEEE Power Engineering Society**

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Abstract: Security issues related to human intrusion upon electric power supply substations are identified and discussed. Various methods and techniques presently being used to mitigate human intrusions are also presented in this guide.

Keywords: construction, intrusion, operation, safety

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3 Park Avenue, New York, NY 10016-5997, USA

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Introduction

(This introduction is not part of IEEE Std 1402-2000, IEEE Guide for Electric Power Substation Physical and Electronic Security.)

This guide was revised by members of Working Group G3/Substation Security and is under the sponsorship of the Substations Environmental Subcommittee of the IEEE Power Engineering Society Substations Committee.

Participants

The members of the Working Group who participated in the creation of this guide were as follows:

Michael J. Bio, Chair
William M. Malone, Vice Chair

Michael J. Bogdan
James C. Burke
Richard G. Cottrell
John W. Dean
W. Bruce Dietzman

David L. Harris
Richard A. Jones
David S. Lehman
John Oglevie
Patrick M. Rooney
Alan C. Rotz

Anne-Marie Sahazizian
C. M. ...
Charles Stouf
Raymond L. Stoudt
Robert F. Weeden

The following members of the balloting committee voted on this standard:

Hanna E. Abdallah
William J. Ackerman
Stuart Akers
Stan J. Arnot
Michael H. Baker
George J. Bartok
Michael J. Bio
Kenneth L. Black
Charles Blattner
Wayne R. Block
Michael J. Bogdan
Stuart H. Bouchey
Steven D. Brown
James C. Burke
Frank Y. Chu
John R. Clayton
Richard G. Cottrell
Richard Crowdis
Frank A. Denbrook
W. Bruce Dietzman
Richard P. Dube

Gary R. Engmann
Markus E. Etter
William R. Fajber
Dennis R. Falkenhen
David Lane Garre
Barry M. Gore
Floyd W. Greenway
Robert E. Howell
Douglas E. Hutchinson
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Richard P. Keil
Hermann Koch
Alan E. Kollar
Terry L. Krummrey
Donald N. Laird
William M. Malone
Rusko Matulic
John D. McDonald
John E. Merando Jr.
Jovan M. Nahman
Philip R. Nannery

Robert S. Nowell
James S. Oswald
Michael W. Pate
Shashi G. Patel
Trevor Pfaff
Percy E. Pool
Paulo F. Ribeiro
Alan C. Rotz
Anne-Marie Sahazizian
Hazairin Samaulah
Samuel C. Sciacca
David Shafer
Gary Simms
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Bodo Sojka
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Brian Story
Raymond L. Stoudt
Duane R. Torgerson
Georg Wild
Mark S. Zar

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Akio Tojo
Hans E. Weinrich
Donald W. Zipse

*Member Emeritus

Also included is the following nonvoting IEEE-SA Standards Board liaison:

Robert E. Hebner

Andrew D. Ickowicz
IEEE Standards Project Editor

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IEEE Guide for Electric Power Substation Physical and Electronic Security

1. Overview

1.1 Scope

This guide identifies and discusses security issues related to human intervention during the construction, operation (except for natural disasters), and maintenance of electric power supply substations. It also documents methods and designs to mitigate intrusions.

1.2 Purpose

Access to electric supply substations by unauthorized personnel is an increasing problem for the electric industry. These intrusions may result in loss of data, damage, and misoperation of equipment and facilities and may create potential safety and environmental liabilities.

This guide presents various methods and techniques presently being used to mitigate human intrusions, as identified in an industry survey.

In 1994, an IEEE Substation Security Guide Survey questionnaire was sent to utilities internationally; the responses from this survey are presented in Clause 7 of this guide.

Refer to IEEE Std 1264-1993¹ for methods being used to counteract nonhuman intrusions.

2. References

This guide shall be used in conjunction with the following publications:

Accredited Standards Committee C2-1997, National Electrical Safety Code[®] (NESC[®]).²

¹Information on references can be found in Clause 2.

²The NESC is available from the Institute of Electrical and Electronics Engineers, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331, USA (<http://standards.ieee.org/>).