AS 5577—2013

Australian Standard®

Electricity network safety management systems

This Australian Standard® was prepared by Committee EN-004, Energy Network Management and Safety Systems. It was approved on behalf of the Council of Standards Australia on 26 March 2013.
This Standard was published on 12 April 2013.

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- Australian Pipeline Industry Association
- Communications, Electrical and Plumbing Union
- Department of Resources, Energy and Tourism
- Electrical Regulatory Authorities Council
- ElectroComms and Energy Utilities Industry Skills Council
- Energy Networks Association
- Grid Australia
- Independent Chairperson
- National Electrical and Communications Association

This Standard was issued in draft form for comment as DR AS 5577.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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First published as AS 5577—2013.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 400 1

PREFACE

This Standard was prepared by the Standards Australia Committee EN-004, Energy Network Management and Safety Systems.

The objective of this Standard is to provide nationally consistent requirements for an Electricity Network Operator's Electricity Network Safety Management System (ENSMS), noting that some electricity supply networks physically cross jurisdictional boundaries and some Electricity Network Operators have networks in multiple jurisdictions.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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FOREWORD

In January 2012, Commonwealth, State and Territory first ministers signed the Intergovernmental Agreement (IGA) on Energy Supply Industry Safety to progress the national harmonization of energy technical and safety regulation across Australia. This IGA endorsed the development of an Australian Standard for Electricity Network Safety Management Systems for electricity transmission and distribution networks to be prescribed in jurisdictional legislation.

In addition, some State and Territory jurisdictions may also require the submission of specific documentation to the relevant regulator, which demonstrates that the Network Operator has established an ENSMS that is compliant with this Standard.

Electricity supply networks are an essential part of the infrastructure supporting the Australian community. Electricity supply networks differ from many other essential infrastructures in that they are physically embedded throughout the community, making network safety essential for both utility business employees who work in and on networks and the community.

As well as the maintenance of network asset integrity, management of vegetation in the vicinity of powerlines is an essential part of maintaining the electrical and fire safety of networks and avoiding catastrophic bushfires. Vegetation management and bushfire risk mitigation are regarded as an integral part of an ENSMS prepared in accordance with this Standard.

STANDARDS AUSTRALIA

Australian Standard
Electricity network safety management systems

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides nationally consistent requirements for the development of an Electricity Network Safety Management System (ENSMS) by an Electricity Network Operator. An ENSMS is used to define how the Network Operator manages the safe design, construction, commissioning, operation, maintenance and decommissioning of its electricity network.

The electricity supply networks to which this Standard applies are electricity transmission networks and electricity distribution networks.

This Standard exists to provide an overarching framework for an ENSMS that recognizes relevant industry network engineering, technical and safety standards, codes and guidelines.

While this Standard has been developed for electricity supply networks, it is recognized that it may be used in relation to the safety of railway electricity networks. Before using this Standard for an electrified railway system, a rail system operator has to review the Standard to determine the Standard's suitability and applicability to the operator's rail system.

This Standard applies to electricity generation facilities that are installed and operated by the Network Operator as part of its electricity network. These include, but are not limited to, the following:

(a) Permanent embedded generation facilities.

(b) Temporary embedded generation facilities.

(c) Emergency generators.

This Standard also applies to powerlines that are owned by and are the connection assets of generation facilities and that are located on land that is outside the boundary of the site on which these generation facilities are installed.

This Standard does not apply to any customer's installation or to plant, appliances and generation equipment within a customer's installation.

1.2 FUNDAMENTAL PRINCIPLES

The fundamental principles on which this Standard is based are as follows:

(a) The Standard exists for the support of—

(i) the safety of the public, and persons near or working on the network;

(ii) the protection of property and network assets;

(iii) safety aspects arising from the protection of the environment, including protection from ignition of fires by electricity networks; and

(iv) safety aspects arising from the loss of electricity supply.