

Energy
Networks
Australia

List of Current Energy Networks Australia's Guidelines

December 2022

Documents of Energy Networks Australia

History of Energy Networks Australia

Energy Networks Australia is the peak national body representing Australia's gas distribution and electricity transmission and distribution companies. Established in its current form in 2004 it has a long history of industry representation, operating under different names over the years to reflect the sector transformation.

With more than 16 million customer connections across the nation, Australia's energy networks provide the final step in the safe, reliable delivery of gas and electricity to virtually every home, business and industry in the country.

Documents

Part of Energy Networks Australia's role is the development and management of support material such as codes, specifications, guidelines and handbooks to support the energy industry and members of the public in the interpretation and application of legislation and standards. All documents are written in collaboration with the industry through reference groups and general consultation with Energy Networks Australia's members.

A full list of documents can be obtained from Energy Networks Australia at <http://www.energynetworks.com.au/industry-guidelines>.

Objective

The objective of this document is to provide an overview of all current Energy Networks Australia's guidelines, codes, specification documents and technical reports.

The documents can be either open access or closed access. Open access documents, denoted by (), can be downloaded free of charge. Closed access documents, denoted by (), are available in SAI Global Store and charges are applied to download a softcopy or obtain a hardcopy.



ENA DOC 001-2019 National Electricity Network Safety Code

Type: Code **Publication Year:** 2019 **Pages:** 28 **Available in:** SAI Global Store [Click Here to Access](#)

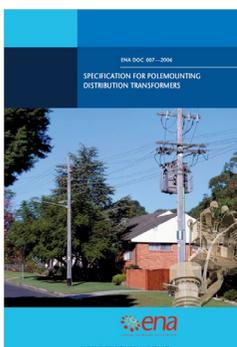
This document provides a basic overview of the safety principles applying to design, construction, operation, maintenance, commissioning and decommissioning of Electricity Networks. This document is intended to complement, but not substitute or override, a number of regulations and Australian Standards. The aim is to provide additional information to guide the development of appropriate, fit for purpose and consistent solutions for Electricity Networks.



ENA DOC 003-2021 (NENS 03) National Guidelines for Safe Access to Electrical and Mechanical Apparatus

Type: Guidelines **Publication Year:** 2021 **Pages:** 42 **Available in:** SAI Global Store [Click Here to Access](#)

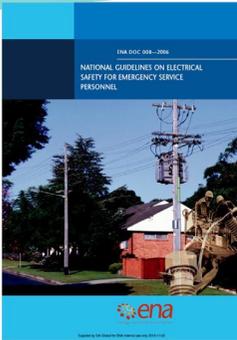
These guidelines detail the minimum general requirements for work to be carried out in the provision of access authorities and for work to be carried out under access authorities including electrical operating work. These guidelines provide principles and responsibilities for network operators, control authorities, service providers and contractors for access to apparatus associated with the transmission and distribution of electricity. These guidelines are not intended to cover specific requirements for other work such as welding and cutting, working at heights, mobile plant, confined spaces, excavation work or work on extra low-voltage exposed conductors.



ENA DOC 007-2006 Specification for Polemounting Distribution Transformers

Type: Specification **Publication Year:** 2006 **Pages:** 34 **Available in:** SAI Global Store [Click Here to Access](#)

This specification sets out the technical requirements for the design, manufacture, testing at works and delivery of pole mounted distribution transformers. The specification includes the requirements for distribution transformers for use in three phase, single phase and single wire earth return (SWER) systems.

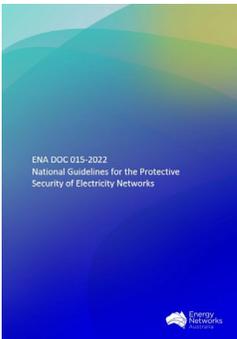


ENA DOC 008-2006

National Guidelines on Electrical Safety for Emergency Service Personnel

Type: Guidelines **Publication Year: 2006** **Pages: 20** **Available in: SAI Global Store** [Click Here to Access](#)

The objectives of these Guidelines are to provide guidance to emergency service personnel on the electrical hazards that may be encountered during emergency situations. These Guidelines are intended to: (a) protect the safety of emergency services workers and the general public; (b) specify minimum control measures for the protection of emergency services workers and the general public where electrical hazards are present; and (c) assist Emergency Services Organisations to develop work procedures and related training and awareness programs.

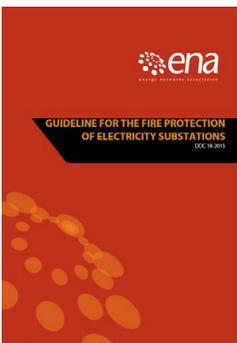


ENA DOC 015-2022

National Guidelines for Protective Security of Electricity Networks

Type: Guidelines **Publication Year: 2022** **Pages: 98** **Available in: SAI Global Store** [Click Here to Access](#)

The intent of this document is to provide NSPs with a best practice starting point for the development and/or augmentation of their physical security program, in response to the evolving regulatory and security risk environment. The document recognises that NSPs will have developed their own standards and guidance associated with the implementation and management of security risk exposure, treatment measures and organisational models and structures and that physical security program elements will be influenced by many factors beyond the security function. Each NSP is therefore responsible for their own interpretation and take up of the ideas and under no circumstances is any methods and info contained within this document considered mandatory



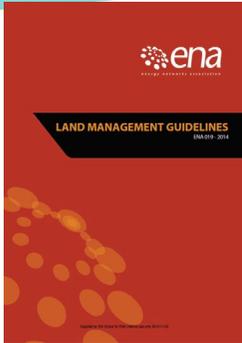
ENA DOC 018-2015

Guideline for the Fire Protection of Electricity Substations

Type: Guidelines **Publication Year: 2015** **Pages: 124** **Available in: SAI Global Store** [Click Here to Access](#)

This Guideline is intended to provide: (a) Design guidance and typical requirements for fire and explosion protection of electricity network substations; (b) Alignment with the relevant Australian Standards; and (c) Nationally consistent approach for the design of fire and explosion protection measures.

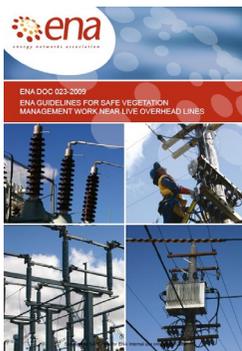
This Guideline aims to assist Network Operators and Service Providers in developing appropriate and fit for purpose design solutions to be applied to electricity network substations.



ENA 019-2014 Land Management Guidelines

Type: Guidelines **Publication Year: 2014** **Pages: 36** **Available in: SAI Global Store** [Click Here to Access](#)

The scope of these guidelines covers the most significant land management issues associated with the design, construction, operation, and maintenance of electricity and gas transmission and distribution systems. The Guideline identifies nationally significant environmental and cultural heritage (both Indigenous and Historical/European, also known as Aboriginal and Non-Aboriginal) issues associated with whole of life asset management and provides environmental and cultural heritage controls, references and performance indicators for ENA members to consider.

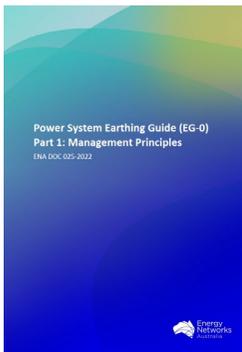


ENA DOC 023-2009 ENA Guidelines for Safe Vegetation Management

Type: Guidelines **Publication Year: 2009** **Pages: 37** **Available in: SAI Global Store** [Click Here to Access](#)

The purpose of these Guidelines is to establish the principles applicable to safe vegetation management work near live overhead lines for various classes of persons.

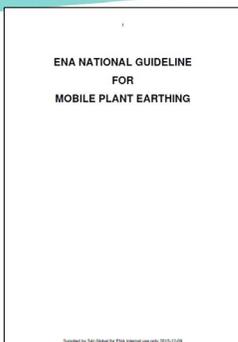
These Guidelines are intended to: (a) ensure the safety of vegetation management workers and the general public; (b) specify the minimum standards required for mobile plant, tools and equipment used in vegetation management work; and (c) provide the basic technical material necessary for Network Operators and Service Providers to develop work procedures, related training and awareness programs.



ENA DOC 025-2022 Power System Earthing Guide (EG-0) Part 1: Management Principles

Type: Guidelines **Publication Year: 2022** **Pages: 186** **Available in: SAI Global Store** [Click Here to Access](#)

This Guideline addresses the high-level aspects of management policies and strategies associated with power system earthing. It provides a framework for managing earthing system related risk associated with electrical power systems to meet societally acceptable and tolerable levels. This framework provides principles for the design, installation, testing, maintenance, and ongoing supervision of earthing systems associated with power system assets on a.c. and d.c. systems with nominal voltages up to EHV. A central part of this framework is a probabilistic derivation of tolerable voltage criteria and exposure under fault conditions.

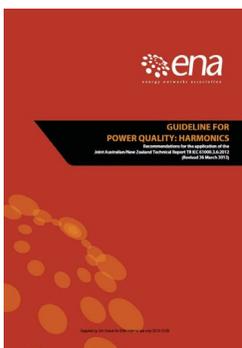


ENA DOC 031-2011

ENA National Guideline for Mobile Plant Earthing

Type: Guidelines **Publication Year:** 2011 **Pages:** 16 **Available in:** SAI Global Store [Click Here to Access](#)

This document is intended to provide: (a) Guidance on earthing for mobile plant to help mitigate the electrical risks that can arise when mobile plant is being used on or near live overhead electrical apparatus including transmission, sub transmission and distribution lines and substations; (b) Assistance in the decision making process to earth or not earth; (c) Guidance on the limitation of various earthing systems and (d) Guidance to applying earths and precautions.

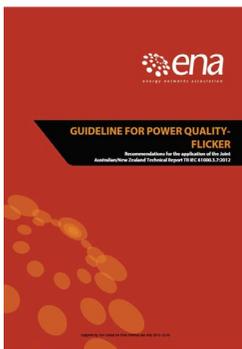


ENA DOC 033-2014

Guideline for Power Quality: Harmonics. Recommendations for the application of the Joint Australian/New Zealand Technical Report TR IEC 61000.3.6:2012

Type: Guidelines **Publication Year:** 2014 **Pages:** 86 **Available in:** SAI Global Store [Click Here to Access](#)

The purpose of this guideline is to provide a coherent and practical guide to the application of the Joint Australian/New Zealand Technical Report, TR IEC 61000.3.6:2012, for limiting harmonic voltages in medium voltage (MV) and high voltage (HV) distribution networks, and to present a simplified approach that a particular DNSP may elect to adopt under certain circumstances. This guideline is not binding and the DNSP's own harmonic management policies shall prevail. The Joint Australian/New Zealand Technical Report is an identical adoption of the IEC publication IEC/TR 61000-3-6, Ed 2.0 (2008). The guideline is also intended to serve as a supporting document to the National Electricity Rules and other jurisdictional technical electricity rules.

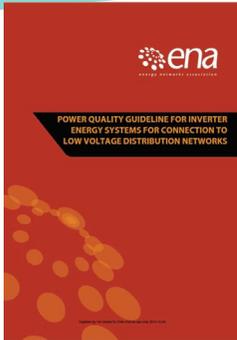


ENA DOC 034-2014

Guideline for Power Quality: Flicker - Recommendations for the application of the Joint Australian/New Zealand Technical Report TR IEC 61000.3.7:2012

Type: Guidelines **Publication Year:** 2014 **Pages:** 33 **Available in:** SAI Global Store [Click Here to Access](#)

The purpose of this guideline is to provide a coherent and practical guide to the application of the joint Australian/New Zealand Technical Report, TR IEC 61000.3.7:2012 for limiting voltage fluctuations in medium voltage (MV) and high voltage (HV) distribution networks, and to present a simplified approach that a particular DNSP may elect to adopt under certain circumstances. It should be understood that this guideline is not binding and the DNSPs own voltage fluctuations management policies shall prevail. The Joint Australian/New Zealand Technical Report is an identical adoption of the IEC publication IEC/TR 61000-3-7, Ed 2.0 (2008). The guideline is intended to serve as a supporting document to the National Electricity Rules and to Rules of other DNSPs that do not come under the jurisdiction of the Australian Energy Regulator (AER).



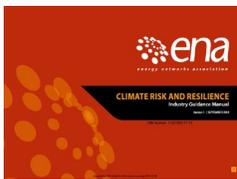
ENA DOC 035-2014

Power Quality Guideline for Inverter Energy Systems for Connection to Low Voltage Distribution Networks Energy Networks Australia

Type: Guidelines **Publication Year:** 2014 **Pages:** 16 **Available in:** SAI Global Store [Click Here to Access](#)

This document provides a simplified approach to managing the connection of low voltage embedded generators only. It may be used at the discretion of the Distribution Network Service Provider (DNSP) to expedite the grid connection of small scale energy systems via inverters where favorable conditions exist.

As this guideline is based on certain simplifying assumptions, there is no guarantee that this approach will always provide the optimum solution for all situations. The recommended approach should be used with flexibility and judgement as far as good engineering practice is concerned, when applying the given assessment procedures in full or in part.

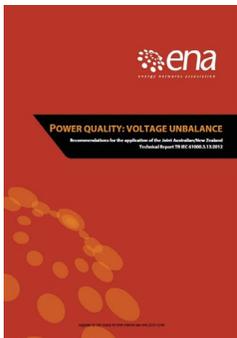


ENA DOC 036-2015

Climate Risk and Resilience - Industry Guidance Manual

Type: Guidelines **Publication Year:** 2014 **Pages:** 538 **Available in:** SAI Global Store [Click Here to Access](#)

This guidance manual has been developed by the Energy Networks Association (ENA) to assist our energy network businesses and external stakeholders alike to assess the risks of a changing climate and develop adaptation plans that addresses the 'high' risks that were identified.



ENA DOC 037-2015

Power Quality: Voltage Unbalance - Recommendations for the application of the Joint Australian / New Zealand Technical Report TR IEC 61000.3.13:2012

Type: Guideline **Publication Year:** 2015 **Pages:** 37 **Available in:** SAI Global Store [Click Here to Access](#)

The purpose of this guideline is to provide a coherent and practical guide to the application of the joint Australian/New Zealand Technical Report, TR IEC 61000.3.13:2012 for limiting voltage unbalance in medium voltage (MV) and high voltage (HV) distribution networks, and to present a simplified approach that a particular DNSP may elect to adopt under certain circumstances. It should be understood that this guideline is not binding and the DNSPs own voltage unbalance management policies shall prevail. The Joint Australian/New Zealand Technical Report is an identical adoption of the IEC publication IEC/TR 61000-3-13, Ed 1.0 (2008) Cor. 1 (2010). The guideline is intended to serve as a supporting document to the National Electricity Rules and to Rules of other DNSPs that do not come under the jurisdiction of the Australian Energy Regulator (AER).

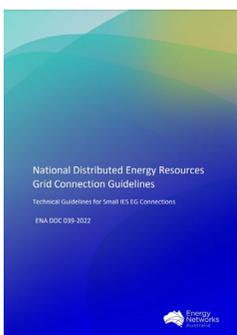


ENA DOC 038-2018

Vegetation Risk Management for Overhead Electricity Networks - Guideline

Type: Guidelines **Publication Year:** 2018 **Pages:** 44 **Available in:** SAI Global Store [Click Here to Access](#)

The document provides an overview of vegetation risk management associated with overhead electrical networks. This document covers vegetation risk management at a management system level; it does not consider specific risk management scenarios associated with vegetation management.

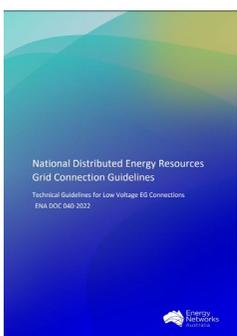


ENA DOC 039-2022

National Distributed Energy Resources Grid Connection Guidelines: Technical Guidelines for Small IES EG Connections

Type: Guidelines **Publication Year:** 2022 **Pages:** 28 **Available in:** ENA Website [Click Here to Access \(Free\)](#)

The National DER Connection Guidelines set out the framework, principles, approach and technical settings for Australian DNSPs to adopt in the development and application of their technical requirements for grid connection of DER. The ultimate aim of the guidelines is to facilitate the efficient integration of DER into the grid from the perspective of networks, renewable energy proponents and Australia's electricity system more generally. This guideline specifies how DNSPs shall develop and apply technical requirements for the connection of a small EG unit with a total system capacity less than or equal to 10 kVA for single-phase IES, and less than or equal to a total system capacity of 30 kVA for three-phase IES to an LV distribution network.



ENA DOC 040-2022

National Distributed Energy Resources Grid Connection Guidelines: Technical Guidelines for Low Voltage EG Connections

Type: Guidelines **Publication Year:** 2022 **Pages:** 37 **Available in:** ENA Website [Click Here to Access \(Free\)](#)

The National DER Connection Guidelines set out the framework, principles, approach and technical settings for Australian DNSPs to adopt in the development and application of their technical requirements for grid connection of DER. The ultimate aim of the guidelines is to facilitate the efficient integration of DER into the grid from the perspective of networks, renewable energy proponents and Australia's electricity system more generally. This guideline specifies how DNSPs shall develop and apply technical requirements for the connection of an EG unit (which is not a small IES EG unit) to a LV distribution network.

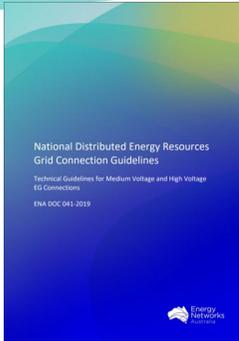
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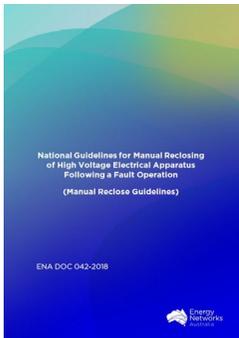


ENA DOC 041-2019

National Distributed Energy Resources Grid Connection Guidelines: Technical Guidelines for Medium Voltage and High Voltage EG Connections

Type: Guidelines **Publication Year:** 2019 **Pages:** 26 **Available in:** ENA Website [Click Here to Access \(Free\)](#)

The National DER Connection Guidelines set out the framework, principles, approach and technical settings for Australian DNSPs to adopt in the development and application of their technical requirements for grid connection of DER. The ultimate aim of the guidelines is to facilitate the efficient integration of DER into the grid from the perspective of networks, renewable energy proponents and Australia's electricity system more generally. This guideline specifies how DNSPs shall develop and apply technical requirements for the connection of an EG unit or EG system to a MV/HV distribution network, for which the EG unit or EG system is not required to be registered in the NEM or WEM, is within other jurisdictions and is < 5 MVA, or for which the EG unit or EG system in the NEM or WEM has a specific exemption issued by the market operator in the relevant jurisdiction from being registered as a generator.

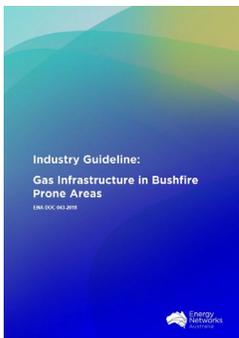


ENA DOC 042-2018

National Guidelines for Manual Reclosing of High Voltage Electrical Apparatus Following a Fault Operation (Manual Reclose Guidelines)

Type: Guidelines **Publication Year:** 2018 **Pages:** 4 **Available in:** SAI Global Store [Click Here to Access](#)

The objective of this guideline is to assist network service providers (and network operators) in identifying actions, considerations and assessing risks prior to manually reclosing high voltage distribution and transmission lines and associated electrical apparatus following a fault operation. This guideline does not stipulate prescriptive details in the operation of high voltage distribution and transmission lines and it is envisaged that individual organisations will establish their own safety management systems and operational procedures for manually reclosing high voltage distribution and transmission lines and associated electrical apparatus following a fault operation. This guideline will encourage a national convergence in approach towards best practice in regard to the management of risk associated with the re-energising of electrical apparatus and will also facilitate community and emergency services awareness regarding the potential dangers associated with electrical apparatus during fault situations.



ENA DOC 043-2018

Industry Guideline: Gas Infrastructure in Bushfire Prone Areas

Type: Guidelines **Publication Year:** 2018 **Pages:** 8 **Available in:** ENA Website [Click Here to Access \(Free\)](#)

The objective of this guideline is to provide informative material that can be used for development of plans for the management of gas infrastructure in bushfire prone areas across the lifecycle of that infrastructure. The informative materials in this guidelines is as an adjust to the relevant Australian Standards, in particular AS4556.1 and can provide a nationally consistent approach for the management of gas infrastructure in bushfire prone areas. This document is intended to complement, but not substitute or override, relevant regulations and Australian Standards.

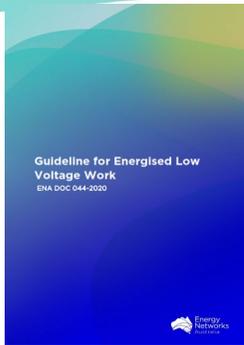
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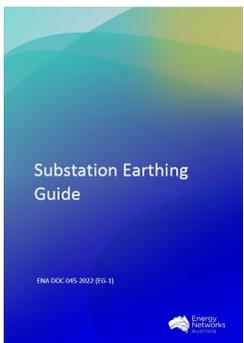


ENA DOC 044-2020

Guideline for Energised Low Voltage Work

Type: Guidelines **Publication Year:** 2020 **Pages:** 23 **Available in:** SAI Global Store [Click Here to Access](#)

The objective of this guideline is to provide nationally consistent approaches for the management of energised low voltage (LV) work. This Guideline is applicable to Energy Supply Industry (ESI) Network Operators and Service Providers when undertaking energised LV work under the control of the Network Operator, which may include some customer equipment such as metering and service fuses. This includes Overhead and Underground systems, and activities carried out in substations.

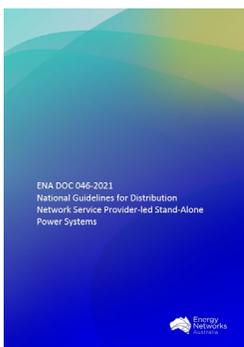


ENA DOC 045-2022

Substation Earthing Guide (EG-1)

Type: Guidelines **Publication Year:** 2022 **Pages:** 199 **Available in:** SAI Global Store [Click Here to Access](#)

The purpose of this guide is to provide guidelines for the design, installation, testing and maintenance of earthing systems associated with electrical substations. Earthing systems that are covered in this guide include those associated with generating plant, industrial installations, transmission and distribution stations. This guideline will encourage a national convergence in approach towards best practice regarding the management of risk associated with Substation Earthing and will also facilitate community and emergency services awareness regarding the potential dangers associated with substations.



ENA DOC 046-2021

National Guidelines for Distribution Network Service Provider-led Stand-Alone Power Systems

Type: Guidelines **Publication Year:** 2021 **Pages:** 49 **Available in:** SAI Global Store [Click Here to Access](#)

This Guideline has been produced to provide a common approach across Distribution Networks Service Providers (DNSPs) for designing, installing, commissioning, operating, maintaining, decommissioning and disposal of DNSP-led Stand-Alone Power Systems (SAPS). This Guideline provides an approach which may differ from traditional SAPS design and installation methodologies with some supporting background and specific requirements that DNSP require for their SAPS. The term SAPS used in this Guideline refers to DNSP-led SAPS (Priority 1 SAPS based on Australian Energy Market Commission (AEMC) terminology) that generate and supply electricity to less than five Small Customers. For the purposes of this Guideline, SAPS are agnostic to technology, however this Guideline aligns to typical configurations for SAPS (noting that alternate technologies may be chosen by DNSPs). This Guideline is not associated with how the connection from the DNSP-led SAPS to the customer premises is made

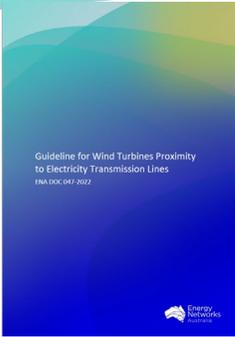
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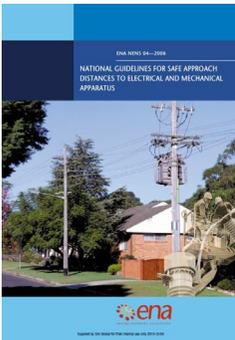


ENA DOC 047-2022

Guideline for Wind Turbines Proximity to Electricity Transmission Lines

Type: Guidelines **Publication Year:** 2022 **Pages:** 26 **Available in:** SAI Global Store [Click Here to Access](#)

The document provides a basic overview of the risks associated with Wind Turbine Generators (WTGs) in close proximity to electricity lines. It provides information on the failure modes and approximate failure rates of WTGs based on historical performance. In particular, the two failure modes which could have consequences for nearby electricity lines: wind turbine structure collapse and blade impact (following a blade detachment event), have been studied in greater detail. Information is also provided in regard to the other consequences of WTGs in very close proximity to electricity lines, and to the long-term issues for electricity lines and network operators as a result of having WTGs in close proximity. Implications for line maintenance are discussed and the need to ensure the security of strategic transmission corridors is presented.

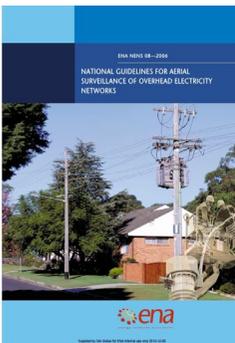


ENA NENS 04-2006

National Guidelines for Safe Approach Distances to Electrical and Mechanical Apparatus

Type: Guidelines **Publication Year:** 2006 **Pages:** 31 **Available in:** SAI Global Store [Click Here to Access](#)

These Guidelines are intended to: (a) Support the Electricity Supply Industry in ensuring the safety of electrical and other workers and the general public by the development of appropriate Safe Approach Distances to electrical apparatus for various classes of persons, and mobile plant and equipment; (b) Provide the basic technical material necessary for Network Operators to develop work practice, and related training and awareness programs; (c) Provide recommendations for appropriate Safe Approach Distances for members of the general public and (d) Provide the Electricity Supply Industry with a sound basis for controlling activities, where possible, of the general public near network assets.

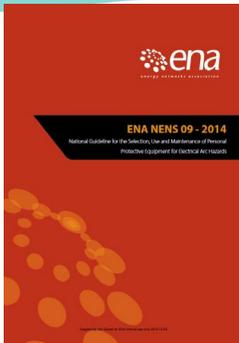


ENA NENS 08-2006

National Guidelines for Aerial Surveillance of Overhead Electricity Networks

Type: Guidelines **Publication Year:** 2006 **Pages:** 14 **Available in:** SAI Global Store [Click Here to Access](#)

The objective of these Guidelines is to support the Electricity Supply Industry in the development of appropriate safe working processes for aerial surveillance of Overhead Electricity Networks. The principles within these Guidelines may be enhanced or supplemented provided this does not result in reduced safety standards. These Guidelines are intended to: (a) ensure the safety of pilot, monitor(s) and the general public; (b) specify the minimum standards required for aerial surveillance of Overhead Electricity Networks; and (c) assist Network Operators to develop work procedures and related training and awareness programs.



ENA NENS 09-2014

National Guideline for the Selection, Use and Maintenance of Personal Protection Equipment for Electrical Arc Hazards

Type: Guidelines **Publication Year:** 2014 **Pages:** 32 **Available in:** SAI Global Store [Click Here to Access](#)

This Guideline covers the clothing and apparel designs, the minimum performance levels of the materials used and the methods of test to determine the performance levels.

This Guideline does not consider protection from electric shock or test for the electrical conductivity of the associated PPE. This Guideline does not consider protection against other hazards, e.g. chemical, biological, noise and radiation hazards.

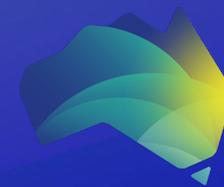
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