AS 6947—2009

Australian Standard®

Crossing of waterways by electricity infrastructure

This Australian Standard® was prepared by Committee EL-052, Electrical Energy Networks, Construction and Operation. It was approved on behalf of the Council of Standards Australia on 19 December 2008.
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The following are represented on Committee EL-052:

- Australian Services Union
- CIGRE
- Communications, Electrical and Plumbing Union
- Electrical Regulatory Authorities Council
- Energy Networks Association
- National Electrical and Communications Association
- National Generators Forum

Additional Interests:

- NSW Maritime

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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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PREFACE

This Standard was prepared by Standards Australia Committee EL-052, Electrical Energy Networks, Construction and Operation, as one of a suite of Standards being produced, following a request, on behalf of the Australian Maritime Safety Authority (AMSA) and Energy Networks Authority (ENA). It is intended to facilitate the incorporation of safety guidelines and codes of practice for the design and installation of safe crossings of navigable waterways by electricity infrastructure to promote safe maritime navigation.

This Standard is broadly based on a code prepared by NSW Maritime and relevant NSW stakeholders. In particular, all of the drawings used were developed by NSW Maritime, which has kindly agreed to their use.

Electricity cables, overhead transmission lines and other similar equipments, like pipes and wires which cross navigable waters, can pose a hazard to navigation. The most significant potential hazards are posed by live, overhead and underground electricity crossings. Serious accidents and even death can occur when a vessel comes into contact with live electricity wires.

This Standard defines the code of practice and technical guidelines for standardizing the crossings of navigable waterways by electricity infrastructure to ensure maritime safety.

The terms ‘normative’ and ‘informative’ are used 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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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets the requirements for crossings of navigable waterways by overhead and submarine electricity infrastructure.

This Standard is intended for use by crossing controllers for the planning, design and maintenance of crossings.

This Standard shall apply to all new crossings after the implementation date.

NOTE: The Standard should also be applied to existing crossings.

This Standard does not apply to the following:

(a) Installation practices.

(b) Environmental considerations.

(c) Impact on public amenity.

(d) Extra low voltage or communication cables.

(e) Electricity infrastructure close to but not crossing navigable waterways.

Crossing controllers are responsible for adopting appropriate procedures to cover (a) to (e), above.

The principles and requirements within this Standard are able to be enhanced or supplemented, provided this results in equivalent or improved safety outcomes.

1.2 OBJECTIVES

The objectives of this Standard are to—

(a) promote the safety of vessels and their occupants on navigable waterways;

(b) manage the hazards associated with crossings of waterways by electricity infrastructure; and

(c) establish the minimum standards required for crossings of navigable waterways.

1.3 REFERENCED DOCUMENTS

The following documents are referenced in this Standard.

AS

1744 Forms of letters and numerals for road signs (known as Standard alphabets for road signs)

2416 Design and application of water safety signs

2700 Colour Standards for general purposes

3891 Air navigation—Cables and their supporting structures—Marking and safety requirements

