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~~Design criteria of~~ Overhead transmission lines – Design criteria

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International Standard IEC 60826 has been prepared by IEC technical committee 11: Overhead lines.

This fourth edition cancels and replaces the third edition published in 2003. It constitutes a technical revision.

The main technical changes with regard to the previous edition are as follows:

This standard has been further simplified by removing many informative annexes and theoretical details that can now be found in CIGRE Technical Brochure 178 and referred to as needed in the text of the standard. Many revisions have also been made that reflect the users experience in the application of this standard, together with information about amplification of wind speed due to escarpments. The annexes dealing with icing data have also been updated using new work by CIGRE.

The text of this standard is based on the following documents:

FDIS	Report on voting
11/251/FDIS	11/252/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

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1 Scope

This International Standard specifies the loading and strength requirements of overhead lines derived from reliability-based design principles. These requirements apply to lines 45 kV and above, but can also be applied to lines with a lower nominal voltage.

This document also provides a framework for the preparation of national standards dealing with overhead transmission lines, using reliability concepts and employing probabilistic or semi-probabilistic methods. These national standards will need to establish the local climatic data for the use and application of this standard, in addition to other data that are country-specific.

Although the design criteria in this standard apply to new lines, many concepts can be used to address the design and reliability requirements for refurbishment, upgrading and uprating of existing lines.

This document does not cover the detailed design of line components such as ~~towers~~ supports, foundations, conductors or insulators strings.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60652~~:2002~~, *Loading tests on overhead line structures*

IEC 61089~~:1991~~, *Round wire concentric lay overhead electrical stranded conductors*

IEC 61773~~:1996~~, *Overhead lines – Testing of foundations for structures*

IEC 61774~~:1997~~, *Overhead lines – Meteorological data for assessing climatic loads*

IEC 61284~~:1997~~, *Overhead lines – Requirements and tests for fittings*

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INTERNATIONAL STANDARD

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Overhead transmission lines – Design criteria



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- amended.

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OVERHEAD TRANSMISSION LINES – DESIGN CRITERIA

1 Scope

This International Standard specifies the loading and strength requirements of overhead lines derived from reliability-based design principles. These requirements apply to lines 45 kV and above, but can also be applied to lines with a lower nominal voltage.

This document also provides a framework for the preparation of national standards dealing with overhead transmission lines, using reliability concepts and employing probabilistic or semi-probabilistic methods. These national standards will need to establish the local climatic data for the use and application of this standard, in addition to other data that are country-specific.

Although the design criteria in this standard apply to new lines, many concepts can be used to address the design and reliability requirements for refurbishment, upgrading and uprating of existing lines.

This document does not cover the detailed design of line components such as supports, foundations, conductors or insulators strings.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60652, *Loading tests on overhead line structures*

IEC 61089, *Round wire concentric lay overhead electrical stranded conductors*

IEC 61773, *Overhead lines – Testing of foundations for structures*

IEC 61774, *Overhead lines – Meteorological data for assessing climatic loads*

IEC 61284, *Overhead lines – Requirements and tests for fittings*