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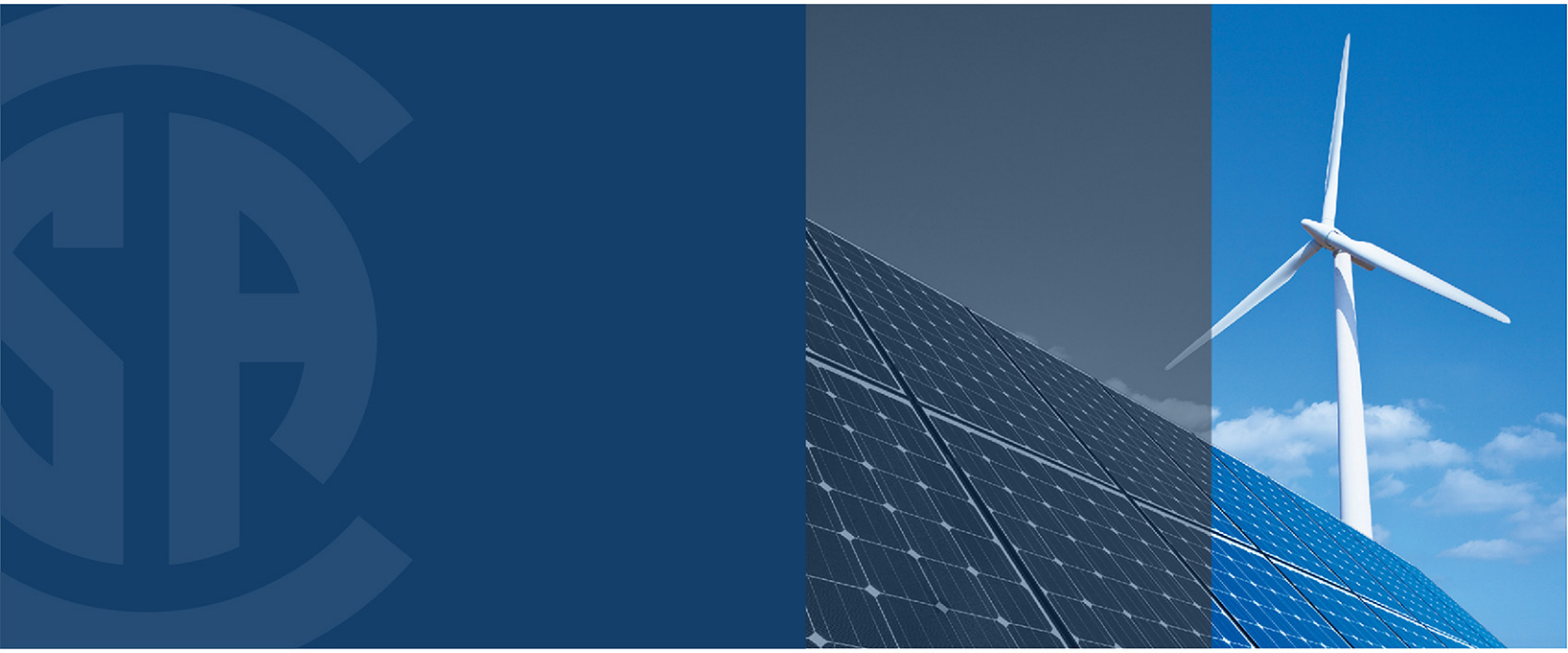
CSA C22.2 No. 272:20
National Standard of Canada

Wind turbine electrical systems



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Wind turbine electrical systems

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Preface

This is the second edition of C22.2 No. 272, *Wind turbine electrical systems*. It supersedes the previous edition published in 2014. It is one of a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*.

The major changes to this edition include the following:
a) updated the definition of "voltage" to align with the *Canadian Electrical Code, Part I*;
b) updated the requirements regarding large wind turbine disconnecting means;
c) added requirements to Clause 9.7 on emergency stop devices;
d) added a new Clause (9.9) on high voltage disconnection means; and
e) added a new Clause (13.3.3) on lithium-ion batteries.

For general information on the Standards of the *Canadian Electrical Code, Part II*, see the Preface of CSA C22.2 No. 0. This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was prepared by the Subcommittee on Wind Turbines — Electrical Qualification, under the jurisdiction of the Technical Committee on Wind Turbines and the Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Interpretations: The Strategic Steering Committee on Requirements for Electrical Safety has provided the following direction for the interpretation of standards under its jurisdiction: "The literal text shall be used in judging compliance of products with the safety requirements of this Standard. When the literal text cannot be applied to the product, such as for new materials or construction, and when a relevant CSA committee interpretation has not already been published, CSA Group's procedures for interpretation shall be followed to determine the intended safety principle."

Notes:
1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
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   Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at* ***standardsactivities.csa.ca****.*
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b) *relevant clause, table, and/or figure number;*
c) *wording of the proposed change; and*
d) *rationale for the change.*

CSA C22.2 No. 272:20
Wind turbine electrical systems

1 Scope

1.1
This Standard applies to complete wind turbine electrical systems and associated electrical equipment intended for connection at not more than 46 kV and intended for use in accordance with the *Canadian Electrical Code, Part I*. Products covered by the scope of this Standard are subject to the requirements of CSA C22.2 No. 0.

1.2
This Standard applies to wind turbines of all sizes.

1.3
This Standard does not apply to performance with respect to grid codes or to power performance of wind turbines.

Note: *Information on test methods for power performance of wind turbines can be found in CAN/CSA C61400-12-1 and IEC 61400-12-2.*

1.4
In this Standard, “shall” is used to express a requirement, i.e. a provision that the user is obliged to satisfy in order to comply with the Standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

1.5
The values given in SI units are the units of record for the purposes of this Standard. The values given in parentheses are for information and comparison only.

2 Reference publications
This Standard refers to the following publications and where such reference is made, it shall be to the edition listed below.

