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Part 1: Design requirements

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WIND ~~TURBINES~~ ENERGY GENERATION SYSTEMS –**Part 1: Design requirements**

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International Standard IEC 61400-1 has been prepared by IEC technical committee 88: Wind energy generation systems.

This fourth edition cancels and replaces the third edition published in 2005 and Amendment 1:2010. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) general update and clarification of references and requirements;
- b) extension of wind turbine classes to allow for tropical cyclones and high turbulence;
- c) Weibull distribution of turbulence standard deviation for normal turbulence model (NTM);
- d) updated design load cases (DLCs), in particular DLC 2.1 and 2.2;
- e) revision of partial safety factor specifications;
- f) major revision of Clauses 8, 10 and 11;
- g) introduction of cold climate requirements, Clause 14;
- h) new Annex B on design load cases for site-specific or special class S wind turbine design or site suitability assessment;
- i) new Annex J on prediction of the extreme wind speed of tropical cyclones by using Monte Carlo simulation method;
- j) new Annex K on calibration of structural material safety factors and structural design assisted by testing;
- k) new Annex L on assessment and effects of icing climate;
- l) new Annex M on medium wind turbines.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
88/696/FDIS	88/701/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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