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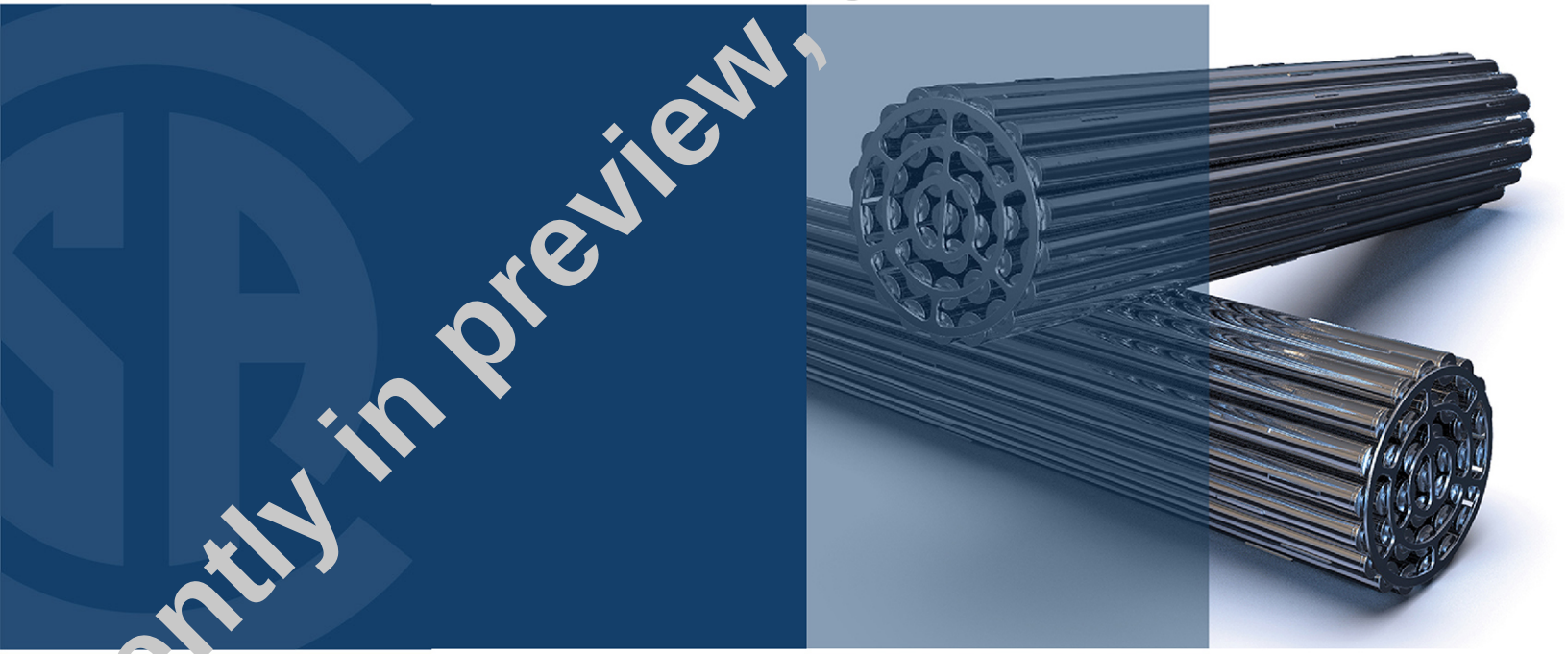
Probabilistic safety assessment for nuclear power plants



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Preface

This is the second edition of CSA N290.17, *Probabilistic safety assessment for nuclear power plants.* It supersedes the previous edition published in 2017.

This Standard provides requirements regarding preparation and maintenance of a probabilistic safety assessment at a water-cooled nuclear power plant. It reflects Canadian regulatory requirements, operating experience of the Canadian nuclear industry, and international good practices, including requirements of the International Atomic Energy Agency (IAEA), the American Society of Mechanical Engineers (ASME), and the American Nuclear Society (ANS).

Changes to this edition include

a) the addition of OPEX on POS duration;
b) guidance on mission time based on industry developments;
c) clarification of qualitative and quantitative screening criteria in Annex F;
d) clarification and streamlining of clauses to improve readability;
e) updating the publications listed in Clause 2 with latest editions; and
f) alignment of definitions with CSA common definitions and other CSA N290 series of Standards.

Users of this Standard are reminded that the site selection, design, manufacture, construction, installation, commissioning, operation, and decommissioning of nuclear facilities in Canada are subject to the *Nuclear Safety and Control Act* and its *Regulations*. The Canadian Nuclear Safety Commission might impose additional requirements to those specified in this Standard.

The CSA N-Series Standards provide an interlinked set of requirements for the management of nuclear facilities and activities. The CSA N286 Standard provides overall direction to management to develop and implement sound management practices and controls, while the other CSA Group nuclear Standards provide technical requirements and guidance that support the management system. This Standard works in harmony with CSA N286 and does not duplicate the generic requirements of CSA N286; however, it might provide more specific direction for those requirements.

This Standard was prepared by the Subcommittee on Probabilistic Safety Assessment for Nuclear Power Plants, under the jurisdiction of the Technical Committee on Reactor Safety and Risk Management and the Strategic Steering Committee on Nuclear Standards, and has been formally approved by the Technical Committee.

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.*
4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include "Request for interpretation" in the subject line:*
    a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
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