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# **Building energy estimation methodology**

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# Preface

This is the first edition of the CSA C873 Series of Standards, *Building energy estimation methodology*. It consists of the following Standards:

- (a) the first edition of CSA C873.0, *Definitions and general requirements for the calculation of energy loads, energy consumption, and source energy for heating, cooling, ventilation, domestic hot water, and lighting in buildings*;
- (b) the first edition of CSA C873.1, *General balancing procedures, terms and definitions, zoning, and evaluation of energy types*;
- (c) the first edition of CSA C873.2, *Energy loads for heating and cooling of building zones*;
- (d) the first edition of CSA C873.3, *Energy loads for conditioning air*;
- (e) the first edition of CSA C873.4, *Energy consumption for lighting*;
- (f) the first edition of CSA C873.5, *Energy consumption for heating systems*;
- (g) the first edition of CSA C873.7, *Energy consumption for air-handling and air-conditioning systems*;
- (h) the first edition of CSA C873.8, *Energy consumption for domestic hot-water systems*;
- (i) the first edition of CSA C873.9, *Energy consumption and source energy for combined heat and power plants*; and
- (j) the first edition of CSA C873.10, *Boundary conditions of use — Climatic data*.

CSA C873.0 provides requirements that are common to some or all of the Standards of the CSA C873 Series. Wherever possible, individual Standards make reference to the relevant clauses in CSA C873.0.

These Standards provide a methodology for assessing the overall energy efficiency of buildings. The calculations enable all energy quantities required for the purpose of heating, domestic hot-water heating, ventilation, air conditioning, and lighting of buildings to be assessed.

CSA gratefully acknowledges that the development of the CSA C873 Series of Standards was made possible, in part, by the financial support of BC Hydro, Manitoba Hydro, the Ontario Power Authority (OPA), Efficiency Nova Scotia, Québec Hydro, the Ontario Ministry of Energy, the Canadian Electricity Association (CEA) and Sask Power.

These Standards were prepared by the Subcommittee on Building Energy Estimation Methodology, under the jurisdiction of the Technical Committee on Heating, Ventilation, Air Conditioning, and Refrigeration and have 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.*
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  - (d) *rationale for the change.*